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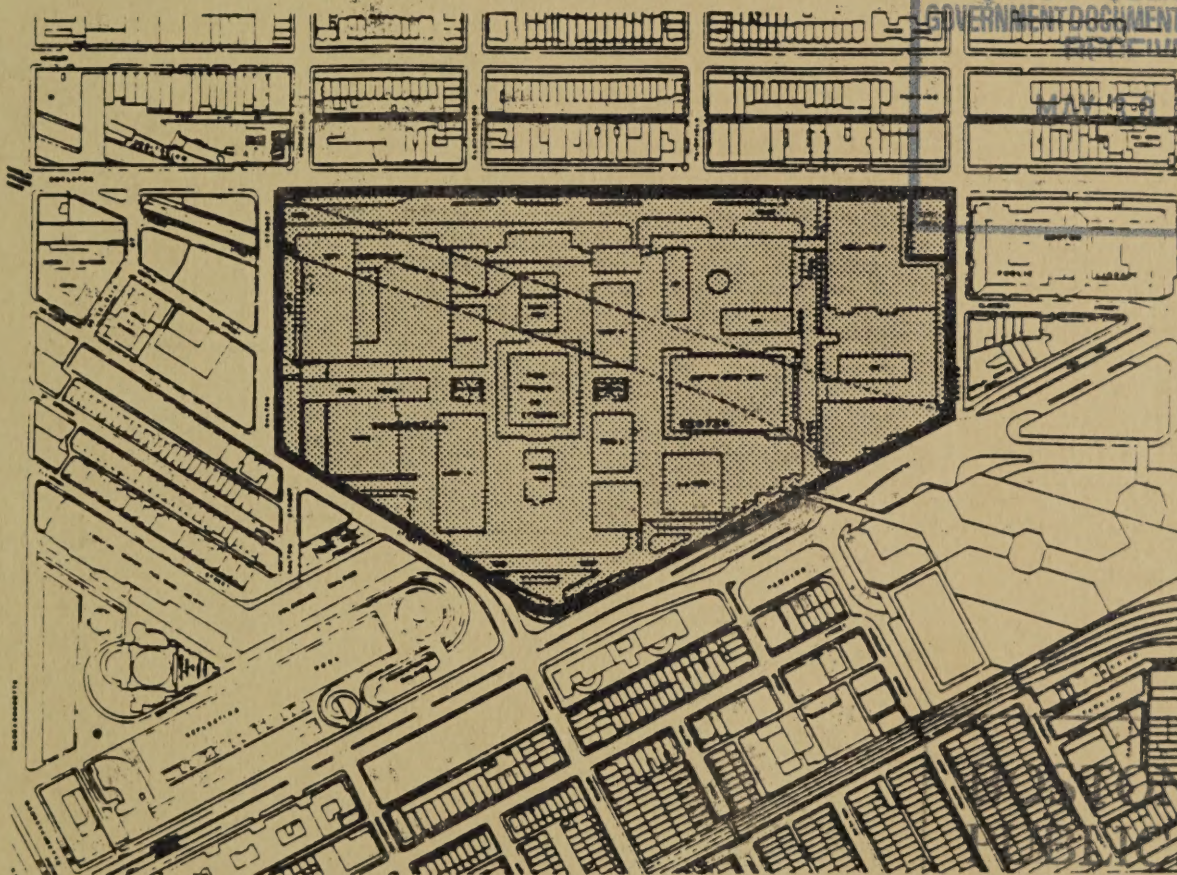
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PRUDENTIAL CENTER

PLANNING REFERENCE BOOK I

Prepared by the Boston Redevelopment Authority
for the Mayor's Prudential Project Advisory Committee



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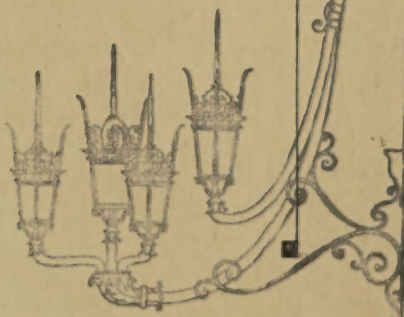
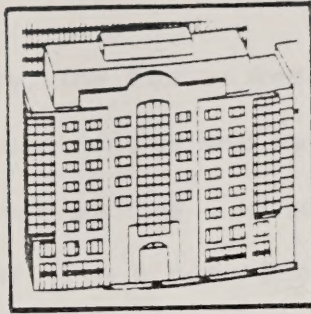


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INTRODUCTION

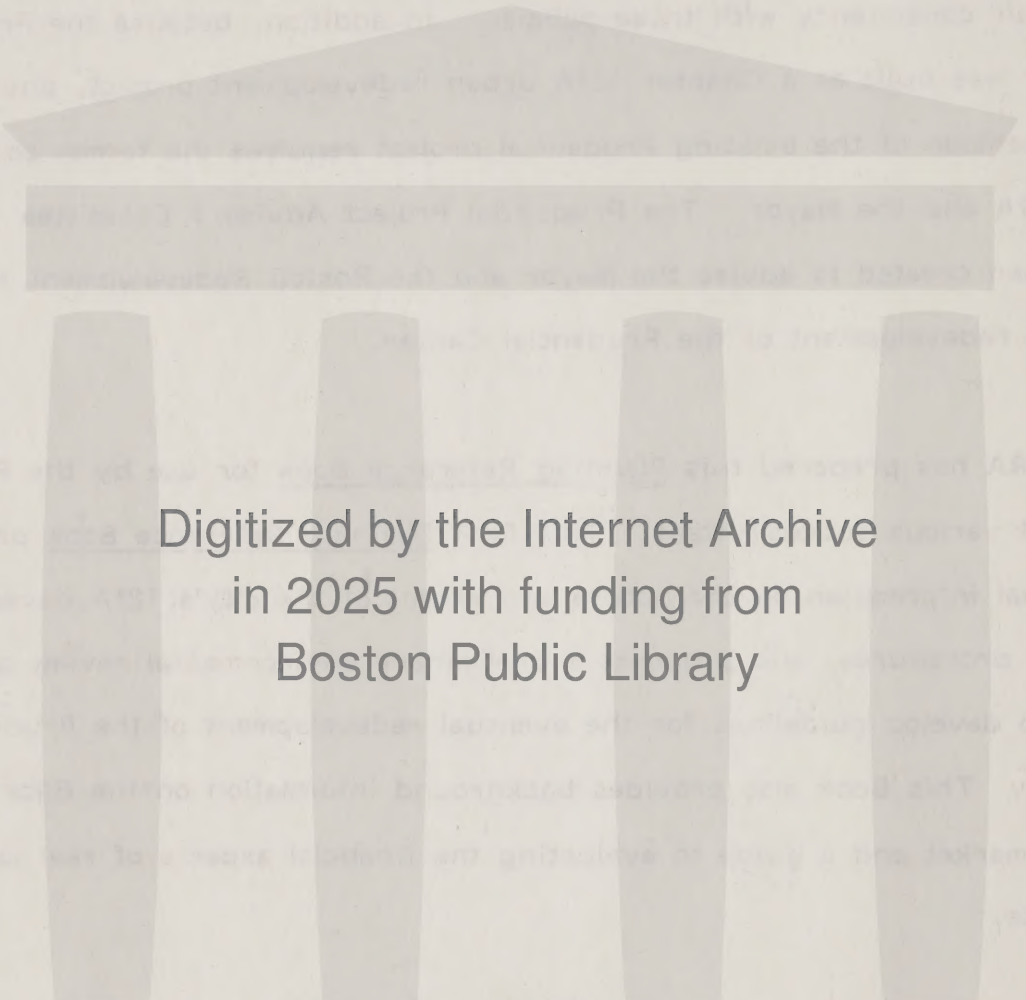


INTRODUCTION

As the City's planning agency, the Boston Redevelopment Authority (BRA) is responsible for setting land use policies and reviewing proposed developments for their consistency with those policies. In addition, because the Prudential Center was built as a Chapter 121A urban redevelopment project, any alteration or expansion of the existing Prudential project requires the formal approval of the BRA and the Mayor. The Prudential Project Advisory Committee (PruPAC) has been created to advise the Mayor and the Boston Redevelopment Authority on the redevelopment of the Prudential Center.

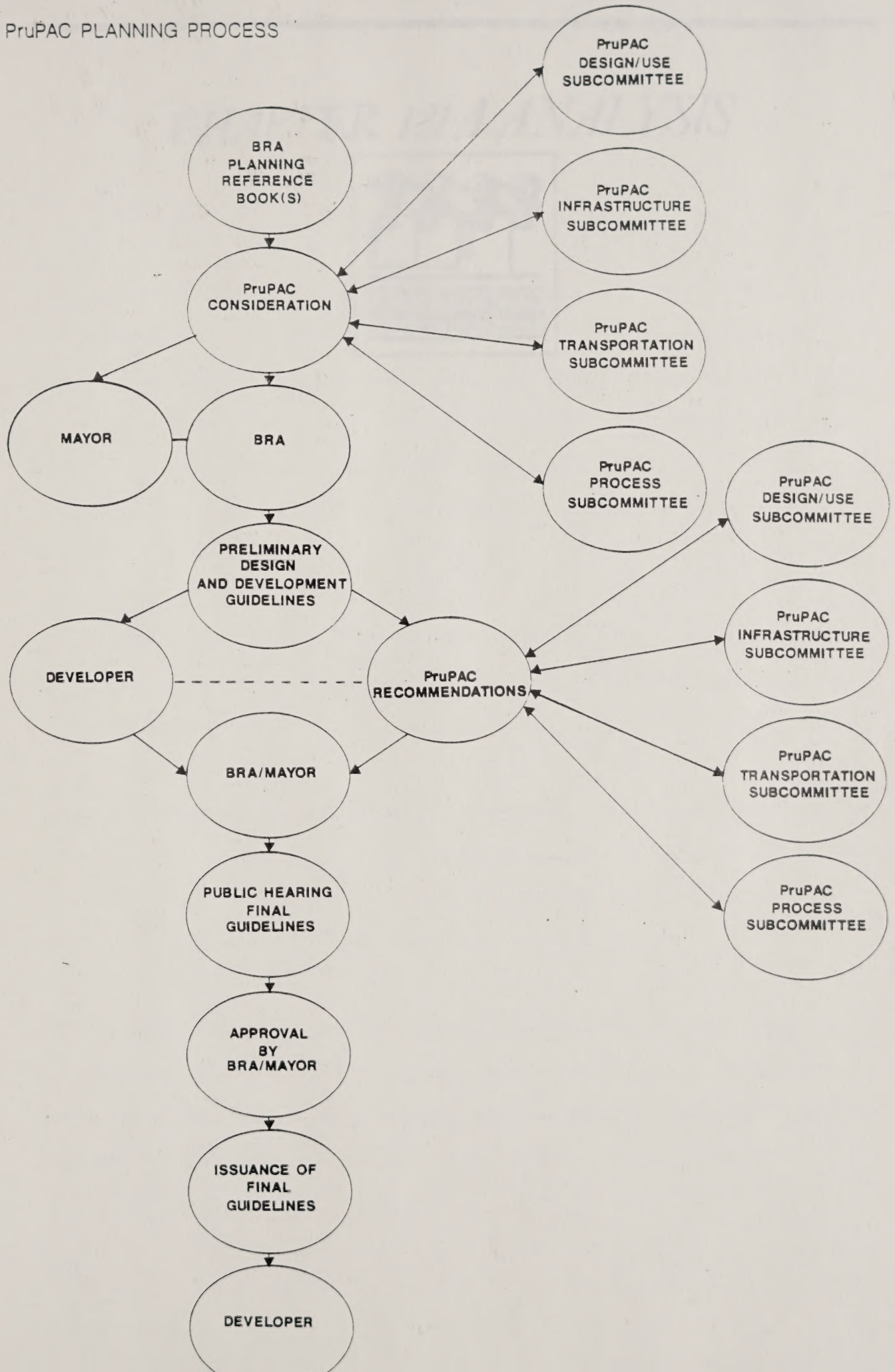
The BRA has prepared this Planning Reference Book for use by the PruPAC and its various subcommittees. This first Planning Reference Book provides essential information on the nature and extent of the city's 121A development review procedures, and proposes a preliminary environmental review process to help develop guidelines for the eventual redevelopment of the Prudential Center. This Book also provides background information on the Back Bay office market and a guide to evaluating the financial aspects of real estate projects.

Subsequent Planning Reference Book(s) will provide information on the Back Bay retail and housing markets, urban design, public benefits, and transportation infrastructure.

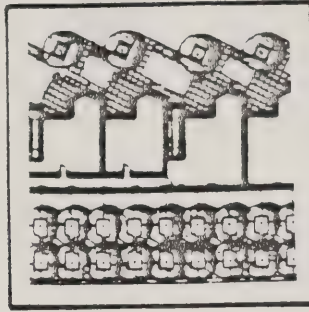


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PruPAC PLANNING PROCESS



CHAPTER 121A ANALYSIS



II. 121A ANALYSIS

A. Background

The sections of Chapter 121A of the Massachusetts General Laws which pertain to payments in lieu of taxes were enacted as part of the Commonwealth's efforts to revitalize its inner cities in the late 1940's and early 1950's. A principal purpose of the law was to provide development projects with certainty and predictability as to property taxes in the era prior to Proposition 2½ when property taxation was a more arcane process than it is today.

The statute authorizes cities and towns to grant favorable tax treatment to "urban redevelopment corporations" who build in "blighted open, decadent, or sub-standard areas."

Originally, the statute applied to only residential developments, but later amendments -- chiefly spurred by the proposed development of the Prudential Insurance Co. -- extended coverage to include commercial development as well. Id., as amended by 1960 Mass. Acts ch. 652, sec. 2.

Until recently, Chapter 121A provided a desirable and, in some cases, necessary property tax arrangement, which served as an incentive for development. Exempted from customary property tax evaluation under M.G.L. Chapter 59, 121A projects make payments in lieu of taxes which can be

projected with some accuracy and, more importantly, could be relied upon with absolute certainty -- a key consideration for developers and banks who needed to forecast cash flows with some degree of assurance.

Under 121A, the Urban Redevelopment Corporation makes in-lieu-of-tax payments in two forms. First, it pays an annual "excise tax" to the Commonwealth, which is repaid in full to the city. This payment, set forth in Section 10 of the statute, amounts to 1% of the fair cash value of the property and 5% of its gross income in the preceding calendar year.

Second, the corporation may have an obligation arising out of an additional agreement between the city and the Urban Development Corporation, under Section 6A. The amount of the "6A payments" is not set by law, but is based on a contract between the city and the developer. Generally, the payments made to the City of Boston have ranged from 20% to 23% of effective gross income for commercial developments and 15% to 18% for residential developments. The developer, however, gets credit for all payments made under Section 10, so that the actual amount paid to the city is the difference between the 6A payment due and the Section 10 payment made to the state.

The Prudential projects under 121A are limited to an annual 6% return on equity. M.G.L.A. ch. 121A, sec. 9. That is, no stockholder in an Urban Development Corporation shall receive dividends in any one year greater than 6% of his investment. This amount can be exceeded, however, to the extent that a prior years' dividends did not reach the 6% ceiling. In other words, if the return in one year did not reach the full 6%, the amount of that deficit may be carried forward and added to the customary ceiling on dividends.

To the extent that gross revenues of a project exceed the operating expenses, dividends, taxes, interest, depreciation and other expenses described in Section 15 of the statute, the remaining funds shall be applied to a payment to the city of an amount equal to the difference between the excise paid and the property tax that would have been paid without 121A benefits.

The carry-forward provisions of Section 9 and the liberal deductions allowed in Section 15 have allowed corporations to accumulate substantial deficiencies which assure that the provisions of Section 15 will probably never take effect. For example, according to statements submitted by the Prudential Insurance Co. to the Commissioner of Insurance, it has never reported a return of as much as 6% on its investment, and probably never will, having accumulated deficiencies of over \$100 million. Id. Thus, it is unlikely that Prudential will ever have to make a payment to the city under Section 15, no matter how high its return during the remainder of its 40-year contract.

Chapter 121A improved on conventional Chapter 59 taxation in two ways:

(1) it established effective tax rates below the then prevailing rates for multi-family housing; and (2) it established certainty with respect to future tax payments -- a crucial prerequisite for the developers and financiers contemplating large residential and mixed-use projects.

Not surprisingly, these incentives were effective. Since 1961, 133 projects -- residential, commercial, and mixed-use -- have been built under 121A, one of the earliest being the Prudential Center (1961), and one of the most recent being Lafayette Place (1979).

B. The Obsolescence of Chapter 121A

Since 1979, however, three events have diminished the attractiveness of Chapter 121A and thus undermined its effectiveness as an incentive to new development.

First, in 1979 the Massachusetts Legislature passed legislation allowing property tax "classification." Classification equalized the tax assessment rate of similar properties, but allowed different rates for four kinds of properties -- residential, open-space, commercial, and industrial. M.G.L. ch. 59, sec. 2A, 1979 Mass. Acts ch. 797, sec. 11. Thus, by requiring that all similarly classified property be taxed at the same rate, this legislation eliminated much of the capriciousness and inequity of the previous system of assessment.

Second, -- and perhaps most important -- in 1980 Massachusetts voters approved "Proposition 2½," officially titled "An Act Limiting State and Local Taxation and Expenditures." 1980 Mass. Acts ch. 580. This statewide tax limitation initiative limited annual property taxes to 2½% of "full and fair cash valuation" of property, and restricted increases in a city's total levy to 2½% per year. M.G.L. ch. 59, sec. 21C, inserted by 1980 Mass. Acts ch. 580.

Third, in 1983 the Assessing Department embarked on a city-wide revaluation, which has resulted in "greater fairness and predictability for all property tax accounts, and permission to favor residential taxpayers through the implementation of classification." Id.

These changes have brought about a significant reduction in residential tax rates, and have provided incentives to development far beyond those offered in Chapter 121A. For example, the tax rate for residential property in Boston for 1985 was 80% lower than that of 1978. And, according to BRA projections, this ad valorem rate will continue to decline. Thus, the predictability of property taxation previously sought under ch. 121A is now attainable without subjecting projects to the constraints of 121A status.

C. Pressure for Amending Chapter 121A

One result of these changes in the property tax evaluation of residential property is that several owners of 121A projects have made requests to the Boston Redevelopment Authority (BRA) -- the agency handling all 121A projects in Boston -- for permission to amend their agreements, releasing them from taxation under their old formulas and allowing the property taxes to be computed in a manner more in line with the current practices under Proposition 2½. Some owners have gone further, requesting a complete termination of their 121A agreement. Such requests are usually accompanied by a desire to convert the rental units to cooperatives, something which the statute does not forbid, but which requires the permission of the BRA. Bronstein v. Prudential Insurance Co. of America, 390 Mass. 701, 459 N.E.2d 772 (1984). The BRA is, of course, under no legal obligation to change the agreements, but is willing to consider such changes if it is in the interest of the city.

D. Sale or Transfer of Existing 121A Projects

121A corporations are free to sell, exchange, or transfer their interests in projects, with the approval of the BRA. Section 11 states:

Any such corporation shall have the power, with the approval of the [BRA], to sell, exchange, give or otherwise transfer in whole or in part the land or interests therein, including air rights, leased or acquired by it under this chapter, with the buildings or other structures thereon, constituting a project or portion hereunder to...any other authorized entity under this chapter...

M.G.L. ch. 121A, sec. 11.

If, however, the project is sold before the expiration of the minimum 15-year agreement, the original benefits, restrictions, and obligations still apply -- or at least may not be changed without BRA approval. The actual language of Section 11 states:

[S]uch land... buildings or other structures may be sold only subject to the further requirement that any change in the benefits and restrictions applicable to the grantee, donee or transferee and any other changes in the project shall not be valid unless approved in the manner provided in section six... or section eighteen B, as the case may be.

M.G.L. ch 121A, sec. 11, as amended 1960 Mass. Acts ch. 652, sec. 12.

In the event of a sale, if the BRA determines that any aspect of the transaction significantly affects the "obligations and duties to be performed and carried out," it may require the purchaser to go through the entire 121A application process once again, "but with such modification in procedure as the [BRA] shall determine to be appropriate... M.G.L. ch. 121A, sec. 18B, as amended by 1975 Mass. Acts ch. 827, sec. 14.

Section 6 details the procedure for original approval of 121A projects and, as a technical matter, does not apply to projects in Boston. The procedure for initial approval of projects in Boston is set forth in Section 13 of chapter 652 of the Acts of 1960. Both sections, however, have the same substantive standards and requirements. These include:

[W]here conditions exist which warrant the carrying out of the proposed project, whether in [the BRA's] opinion such projects will be practicable, whether such project conflicts with the master plan for the city, whether such project would be in any way detrimental to the best interests of the public or the city or to the public safety and convenience or inconsistent with the most suitable development of the city, and whether the project will constitute a public use and benefit.

1960 Mass. Acts ch. 652, sec. 13, as amended by 1965 Mass. acts ch. 859.

In short, if an acquisition is contemplated or any significant changes with respect to obligations and duties are proposed, the Mayor and the BRA must approve the acquisition in the same manner as if it were an original application.

E. Role of the Boston Redevelopment Authority (BRA)

The BRA -- Boston's sole agency for regulating planning and development -- was formed by an act of the Boston City Council in 1957 under M.G.L. ch. 121, Section 26QQ, as amended by 1957 Mass. Acts ch. 150, Section 1. (Section 26QQ has since been repealed and replaced by M.G.L. ch. 121B.)

The specific powers of the BRA as planning agency are set out in Chapter 652 of the Acts of 1960. And the general powers of "operating agencies," including the BRA, are set forth in M.G.L. ch. 121B, sec. 11. Among the powers enumerated in Chapter 121B are:

"(j) To enter into, execute and carry out contracts with any person or organization undertaking a project under chapter one hundred and twenty-one A:"

and

"(1) To enter into, execute and carry out contracts and all other instruments necessary or convenient to the exercise of the powers granted in this chapter."

M.G.L. ch. 121B, sec. 11.

Other powers of the BRA are set forth in Section 12 of ch. 652:

[The BRA] shall, in addition to its other powers and duties, have the powers and duties, have the powers and perform the duties from time to time conferred or imposed upon the state housing board by the provisions of sections six A, seven, seven A, eight, nine, ten, eleven, twelve, fifteen, sixteen, sixteen A, eighteen and eighteen B of [Chapter 121A] with respect to a project thereunder in the City of Boston.

1960 Mass. Acts ch. 652, sec. 12.

The act also established the BRA as a planning board for the City of Boston

M.G.L. ch. 41, sec. 70.

The courts have acknowledged that the Legislature intended a broad grant of authority to the BRA in administering the statute. Boston Edison Co. v. BRA, 374 Mass. 37, 371 N.E.2d 728 (1977).

1. Approvals

The BRA has complete control and flexibility over the approvals process of a 121A application. With the approval of the Mayor, it also has the power to allow a 121A project to deviate from any zoning, building, health or fire law, code, ordinance or regulation in effect in Boston, so long as "such permission may be granted without substantially derogating from the intent and purposes of such law[s]." M.G.L. ch. 121A, as amended by 1960 Mass. Acts ch. 652, sec. 13.

As mentioned earlier, the BRA also oversees any transfers of 121A projects, and must approve any sale. 1960 Mass. Acts ch. 652, sec. 13A, as added by Chapter 859 of the Acts of 1965. It also sets forth the procedures for reviewing any changes proposed in connection with the acquisition. Of particular note is the provision governing "changes": "If the [BRA] determines that any such changes are fundamental, the [BRA] shall proceed as if such application to change were an application for the original approval of the project." Id. (Emphasis added.)

A "fundamental change" has been rather broadly defined as one in which the "nature and magnitude of the revisions of a plan could fundamentally alter the essence of the project." Bronstein v. Prudential Insurance Co. of America, 390 Mass. 701, 710, 459 N.E.2d 772 (1984). In this case, the Supreme Judicial Court decided that converting a building from rental to condominium units as a "fundamental change." In another case, however, the same court decided that increasing the height of an approved project was not. Boston Edison Co. v. BRA, 376 Mass. 151, 379 N.E.2d 778 (1976).

2. Amendments

Under Section 4 of Chapter 121A, the BRA "may make, and from time to time amend, reasonable rules and regulations in regard to the procedure for securing the approval of projects under this chapter and for the financing, construction, management and maintenance of such projects."

While the statute provides the BRA with the authority to grant or amend 121A status, this action may not occur in Boston without a public hearing on the project application and the subsequent issuance and adoption by the BRA of a favorable "Report and Decision" or "finding" of need and appropriateness. Approval of the Mayor is required for amendments to 121A agreements or the creation of Urban Renewal Corporations to be effective.

F. 121A Review Process

On June 27, 1978, the BRA adopted "Rules and Regulations Governing Chapter 121A Projects in the City of Boston." See Appendix _____. These 121A Regulations set forth a process which is summarized as follows for amending a 121A agreement where the amendment involves a fundamental change:

1. Preliminary Review: Submission of letter of interest outlining the proposed amendment.
2. The Application: submission of a detailed project analysis, including materials on design, finance, public benefits, schedule, and other information necessary to permit a comprehensive review.
3. Public Hearing: After a minimum of 10 days notice, the BRA conducts a public hearing on the application.

4. Report and Decision: At the conclusion of the public hearing on the application, the BRA will prepare "Report and Decision" which sets forth the terms of approval, if any, of the applications. The Report and Decision must be approved by the Mayor before it is effective.

G. The Case of Prudential

Prudential entered into its 6A contract with the City of Boston on March 2, 1962. The original report and decision by the Authority for the Prudential project was approved on August 14, 1961. Since the time of the original approval and contract, the report and decision has been amended on numerous occasions to reflect the evolution of the project.

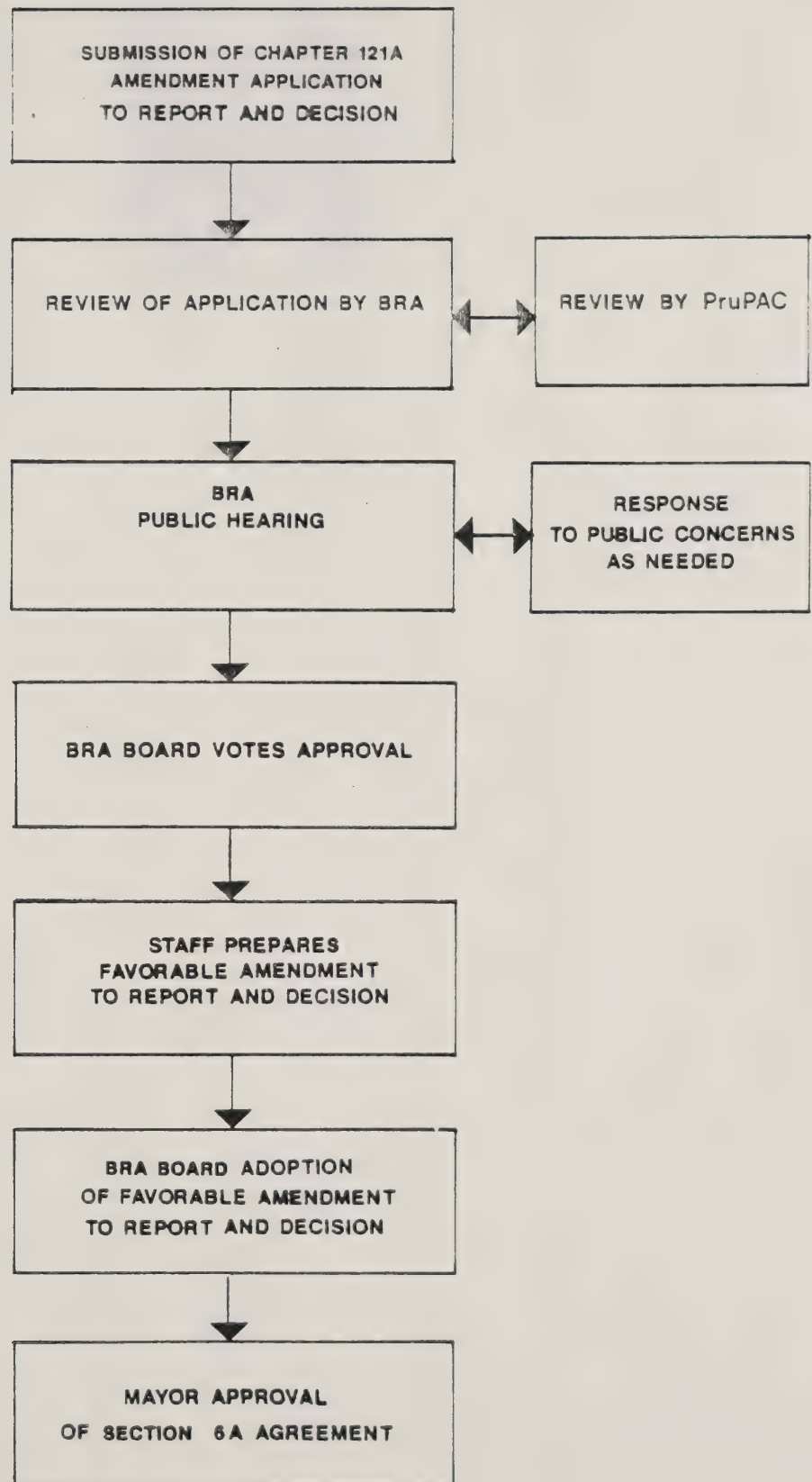
The 6A contract provides that, in return for constructing the Prudential project as approved by the Authority in the report and decision, as amended, Prudential is exempted from Chapter 59 taxation and is allowed to make payments in lieu of taxes equal to 20% of the gross income from the project.

For example, in 1985 the Prudential Company submitted audited and certified summaries of their accounts indicating gross income from the project of \$38,136,762. After allowed adjustments, the gross income was reduced to \$32,372,191, 20% of which was \$6,454,438. Of that amount, \$5,406,838 was payable to the Commonwealth of Massachusetts as a Section 10 payment, leaving a residual amount due to the city under the 6A contract of \$1,047,600. The amount paid by Prudential to the Commonwealth was paid to the City by the Commonwealth later in the calendar year.

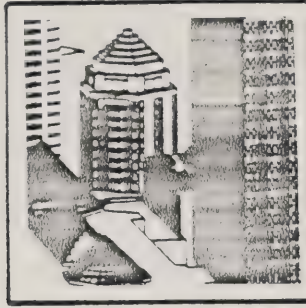
The fair cash value of the project is determined annually by the City and most recently was fixed at \$400,000,000.. A detailed analysis of Prudential's 121A agreement with the city should be undertaken to understand the financial implications of Prudential's 121A status.

Prudential's agreement with the city expires at the end of a 40 year term in March 2002.

CHAPTER 121A REVIEW PROCESS



PRELIMINARY ENVIRONMENTAL REVIEW



III. PRELIMINARY ENVIRONMENTAL REVIEW

The Boston Redevelopment Authority, acting as the city's planning agency, is proposing a preliminary environmental review as the basis for planning the redevelopment of the Prudential Center. This preliminary review would examine four lesser-scaled redevelopment schemes, including a no-build alternative and the Prudential Company's present proposal. The results of these reviews would be used to determine guidelines for the redevelopment. This preliminary environmental review process would be completed prior to the initiation of the formal environmental review.

BRA environmental review will include three progressively smaller alternatives, in addition to the no-build alternative. The overall mass of the three alternatives would be about 1 million, 1.4 million, and 1.7 million FAR square feet of new development, as compared to the present proposal of 2.3 million square feet. Each alternative would specify a particular set of uses by floor area. For example, the 1.0 million square foot alternative might be all housing. The results of these five reviews would be compared against one another to arrive at a preferred development program.

Environmental concerns which will be assessed include the project's impacts on transportation, sunlight, daylight, wind, groundwater, and air and water quality, both during construction and upon completion, as described below in more detail. The visual impacts of the development along Boylston Street and Huntington Avenue, as well as upon historic Back Bay and the St. Botolph neighborhood, will be considered in addition to other urban design concerns.

The design of any project should improve and enhance existing wind conditions is possible, and prevent new shadows from falling on major public spaces, pedestrian arcades, and other elements of the pedestrian network. Specific environmental reviews covered in the BRA's development review procedures include the items listed on the following seven pages. The full scope of the BRA's project review is set forth in Development Review Procedures, which is at the end of this section.

A. Transportation Impacts/Access Plan

1. Parking

- a. Number of spaces provided indicating public and private allocation
- b. Reduction in parking from previous use of site
- c. Proposal's impact on demand for parking
- d. Parking plan, including layout, access, and size of spaces
- e. Evidence of compliance with City of Boston parking freeze requirements

2. Loading

- a. Number of docks
- b. Location and dimension of docks

3. Access

- a. Size and maneuvering space on-site or in public right-of-way
- b. Access, curb cuts, and/or sidewalk changes required

4. Vehicular Traffic

- a. Project vehicular traffic demand and generation (daily and peak-hours) and distribution
- b. Circulation and access impacts on the local and regional street system and local intersections (traffic impact area), including capacity and level-of-service analyses
- c. Modal split and vehicle occupancy analysis
- d. The possibility of east and west access ramps for the Massachusetts Turnpike

5. Public Transportation

- a. Location and availability of public transportation facilities
- b. Usage and capacity of existing system
- c. Peak-hour demand and capacity analysis
- d. Measures to encourage use of public transportation

6. Pedestrian Circulation

- a. Demand and capacity analysis on project area sidewalks
- b. Connections to public transportation station stops
- c. Effect on pedestrian flows of project parking and servicing entrances and exits

7. Access Plan

- a. Measures to manage parking demand and optimize use of available parking spaces, including:
 - o Proposed rate structures(s)
 - o Ride-sharing incentives and information dissemination
 - o Set-asides for high-occupancy-vehicles: number and location
 - o Set-asides for after morning commuter peak (usually 9:30 or 10:00 a.m.)
- b. Measures to encourage public transportation use, including:
 - o Mass transit information dissemination
 - o MBTA pass sales and subsidies
 - o Direct station links or pedestrian connections
- c. Measures to reduce peaking, including:
 - o Encouragement of flexible work hours
 - o Restrictions on service and good deliveries
- d. Measures to mitigate construction impacts, including:
 - o Time and routes of truck movements
 - o Storage of materials and equipment
 - o Worker parking and commuting plan
- e. Monitoring and reporting measures

B. Wind

Information on pedestrian level winds is required during the schematic design stage for build and no-build conditions. Wind tunnel testing will be required for:

- a. Any building higher than 150 feet
- b. Any building 100 feet high and two times higher than the adjacent buildings
- c. Other buildings which fall below these thresholds, but because of their context and particular circumstances would require wind tunnel testing

Particular attention shall be given to public and other areas of pedestrian use (sidewalks, plazas, building entrances, etc.) adjacent to and in the vicinity of the project site.

1. Wind tunnel testing is to be conducted in two stages - Stage I Qualitative Study and Stage II Hot Wire Testing. For Stage I, an erosion study (or equivalent methodology) must be conducted to determine potential problem areas and to identify appropriate placement of sensors for hot wire testing.
2. Wind tunnel testing should be conducted according to the following criteria:
 - a. Results of wind tunnel testing should be consistently presented in miles per hour (mph).
 - b. Velocities should be measured at a scale equivalent to 6 feet above ground level.
 - c. The instrument should have a frequency response that is flat to 100 hertz and filters out any higher frequency (hot wire testing).
 - d. The expected one percent occurrence of hourly average, effective gust, and peak gust velocities should be reported (hot wire testing).
 - e. Erosion study data shall be presented in tabular form and graphically through photographs showing changes between build and no-build conditions.
 1. Wind directions from the sixteen compass points shall be used noting the percent or probability of occurrence of each direction on a seasonal and annual basis.
 2. Wind velocities for each direction shall include the intervals: 0-15 mph and every 5 mph interval from 15 to 40 mph inclusive.
 3. For each ground station tested, data shall include, in addition to the annualized 1% occurrence of wind speeds, the 1% wind velocities for each of the four seasons of the year and the percentile contribution of the 1% wind velocity from each of the 16 wind directions.
 - f. Hot wire data shall be presented both in tabular form and graphically on a map to indicate velocity changes between build and no-build conditions.
 1. The effective gust velocity can be computed by the formula: average hourly velocity plus $1.5 \times \text{root mean square (rms) variations about the average}$.

2. Analysis should be presented as follows:

a. Present data for existing (no-build) and future build scenarios as follows:

Mean velocity (exceeded 1% of time)

Effective gust velocity (exceeded 1% of time)

b. Compare mean and effective gust wind speeds on both annual and seasonal basis, by wind direction.

c. Provide a written descriptive analysis of wind environment and impacts for each sensor point including such items as source of winds, direction, seasonal variations, etc., as applicable. Include analysis of suitability of location for various activities (e.g., walking, sitting, eating, etc.) as appropriate.

d. Provide maps of sensor locations with wind speed data, graphically indicating changes in wind speeds.

3. For areas where wind speeds are projected to exceed acceptable levels, measures to reduce wind speeds and mitigate potential adverse impact shall be identified.

C. Shadow (Information should be provided during the schematic design stage.)

1. Shadow analysis plans should be submitted at a scale of 1' = 40' and 1" = 100'.

2. Shadow impact analysis must include net new shadows as well as existing shadows.

3. Initial shadow analyses must include shadow impacts for build and no-build conditions for the hours 9:00 a.m., 12:00 noon, and 3:00 p.m. conducted for four periods of the year at the vernal equinox, autumnal equinox, winter solstice, and summer solstice.

4. Shadow analyses also are to be conducted at 10:00 a.m., 11:00 a.m., 12:00 noon, 1:00 p.m., and 2:00 p.m. on October 21 and November 21, and must show the incremental effects of the proposed massing on proposed or existing public spaces including major pedestrian areas.

5. Additional shadow analyses may be required depending on the particular physical characteristics of the site including its solar orientation relative to public open spaces, pedestrian patterns and street patterns, and existing shadows in the area.

- D. Daylight (Information should be provided during the schematic design stage.)
 - 1. Daylight analysis for build and no-build should be conducted by measuring the percentage of skydome that is obstructed by a building.
 - a. Specific technique and graphic methodologies required for determining percent of obstructed skydome will be provided by the BRA.
- E. Excavation and Landfill
 - 1. Written description including amount and method of excavation, dredging and filling proposed, and the existence of blasting and pile driving
 - 2. Analysis of sub-soil conditions, potential for ground movement and settlement during excavation, and impact on adjacent buildings and utility lines
- F. Groundwater
 - 1. List of measures used to ensure the groundwater levels will not be lowered during or after construction, if applicable
 - 2. Engineering analysis of the impact of development on groundwater, surrounding structures, wooden piles and foundations
- G. Solid and Hazardous Wastes/Materials
 - 1. A list of any known or potential contaminants on site together with evidence of the recording with the Registry of Deeds of the disposal of hazardous wastes on the site, pursuant to the M.G.L., Chapter 21C, if applicable
 - 2. Possible hazardous wastes generated
 - 3. Existence of buried gas tanks on site
 - 4. Estimate of potential trash generation and plans for disposal
- H. Noise
 - 1. Where appropriate, noise analyses to determine compliance with City of Boston regulations and applicable state and federal guidelines
 - 2. For residential projects, evaluation of ambient noise levels to determine conformance with the Design Noise Levels established by the U.S. Department of Housing and Urban Development.

I. Flood Hazard Zone/Wetlands

1. Where appropriate, determination of whether or not proposal falls within a Federal Flood Hazard Zone or requires a Wetlands Permit
2. If applicable, description of measures to minimize potential flood damage and to comply with city and federal flood hazard regulations and any Order of Conditions issued by the Boston Conservation Commission

J. Construction Impacts

1. Description of construction staging areas
2. Availability of construction worker parking
3. Potential dust generation and mitigation measures to control dust emissions
4. Permits from Air Pollution Control Commission for sand blasting, if appropriate
5. Potential noise impact and measures to minimize noise levels
6. Truck traffic and access routes
7. Pedestrian safety

K. Historical Landmarks

1. Description of the project site location in proximity to a National or Massachusetts Register site or district or Landmark designated by the Boston Landmarks Commission
2. Possible effects to the National or Massachusetts Register site or district or a Landmark designated by the Boston Landmarks Commission

L. Air Quality

1. Impact on local air quality from additional traffic generated by the project, including identification of any location projected to exceed national or Massachusetts air quality standards
2. Estimation of emissions from any parking garage constructed as part of the project
3. Description and location of building/garage air intake and exhaust systems and evaluation of impact on pedestrians
4. For residential projects, evaluation of the ambient air quality to determine conformance with the National Ambient Air Quality Standards established by the U.S. Environmental Protection Agency.

M. Utility Systems

1. Estimated water consumption and sewage generation from the project
2. Description of the capacity and adequacy of water and sewer systems and an evaluation of the impacts of the project on these systems
3. Identification of measures to conserve resources, including any provisions for recycling

N. Energy

1. Description of energy requirements of the project and evaluation of project impacts on resources and supply
2. Description of measures to conserve energy usage and consideration of feasibility of including solar energy provisions

O. Water Quality

1. Description of impacts of the project on the water quality of Boston Harbor or other water bodies that could be affected by the project, if applicable
2. Description of mitigation measures to reduce or eliminate impacts on water quality

P. Solar Glare

1. Analysis of solar glare impact and solar heat gain analysis, if applicable

DEVELOP- MENT REVIEW PROCEDURES

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DEVELOPMENT REVIEW PROCEDURES

CITY OF BOSTON

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Joseph J. Walsh, Vice-Chairman

James K. Flaherty, Treasurer

Clarence J. Jones, Vice-Treasurer

Michael F. Donlan, Member

Kane Simonian, Secretary

Stephen Coyle, Director

1985, Revised 1986

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INTRODUCTION

As the city's planning and development agency, the Boston Redevelopment Authority (BRA) functions as a coordinator for development projects and has direct responsibility for reviewing development proposals. The BRA's review authority covers a wide range of projects. Projects may require zoning review initiated by a request for a building or occupancy permit from the Inspectional Services Department (ISD), review of financing mechanisms such as Chapter 121A, Commercial Area Revitalization Districts (CARDs), and Urban Development Action Grants (UDAGs); and review of proposals for publicly owned land.

The BRA reviews proposals for their overall viability and expected benefits to the city. Review criteria may vary depending on location, type, and size of the project. Design criteria include specifications for building height, massing, materials, and other guidelines to preserve Boston's history and character. Environmental concerns which are assessed include a project's impacts on sunlight, daylight, wind, groundwater, and air and water quality, both during construction and upon completion. Effects on surrounding neighborhoods, displacement, and community participation are also considered in the review process. Transportation review is concerned with the impacts of additional traffic, parking and loading, and examines proposed changes to rights-of-way or physical changes, encroachments on public space, curb cuts, and requirements of the Boston Air Pollution Control Commission, if applicable. Review criteria are included in the Zoning Code and planning documents.

This booklet outlines the BRA's review process, describes the sources which initiate the BRA's various review functions, outlines the stages of its review, and provides a comprehensive list of submission requirements and development review fees. Projects vary in size and complexity; therefore not all requirements are appropriate to all projects. For example, requests for zoning actions to construct a three-unit dwelling require a review quite different than that for a multi-story commercial project. The extent of the review is defined at an initial meeting between the developer and BRA staff.

Before construction on any project commences, a building permit must be obtained from ISD which is responsible for enforcing the Zoning Code, the Massachusetts State Building Code, and other laws and ordinances relating to building construction and occupancy.

The Massachusetts Environmental Policy Act (MEPA) requires a state review of certain projects to evaluate their environmental impacts. Because MEPA applies to a number of projects which undergo BRA reviews, MEPA's authority and procedures are outlined in Appendix 4.

BRA DEVELOPMENT REVIEW PROCEDURES

To evaluate the quality and appropriateness of a proposal based on objectives stated in plans, guidelines, and regulations governing development in Boston, the Boston Redevelopment Authority conducts a four-stage review process. This review is conducted by BRA staff from its design, development, planning, transportation, environmental, zoning, and engineering departments. The staff is assisted on a project by project basis by citizen advisory groups, the Boston Civic Design Commission, professional associations, and other constituencies. The time-frame for development review and the sequence of phasing may vary depending on the complexity of the project.

Concurrent with the design review of a project and prior to project approval, developers may be required to formulate (1) an access plan which outlines how adverse traffic impacts will be mitigated; (2) an affirmative housing plan; and (3) an employment plan. The submission materials and circumstances under which such plans are required are outlined in the following section entitled "Submission Requirements".

Step One: DEVELOPMENT CONCEPT

Projects are either privately or publicly initiated and the first step in development review varies accordingly. For a privately initiated project, the developer contacts the BRA with a letter of interest which briefly describes the project. The BRA meets with the developer to discuss the development concept, government regulations and procedures, and submission requirements appropriate to the project from the comprehensive list included in this document.

Publicly initiated projects include the disposition or leasing of city- or BRA-owned property which, because of size and location, require development review by the BRA. At the request of the city for city-owned property or at its own behest for BRA-owned property, the BRA may prepare a developer's kit for a specific site, outlining the development concept and guidelines. A request for proposals to develop the site is usually publicly advertised. The applicants are interviewed and the proposals are reviewed by the BRA. For projects proposed in a neighborhood setting, community representatives are notified. Based on the evaluation, the BRA grants tentative designation to a developer for BRA-owned property, or for city-owned property recommends a developer to the Real Property Board or Public Facilities Commission. From this point on, publicly and privately initiated projects follow similar review procedures. In some cases for BRA-owned property, tentative designations will not be made until after schematic review.

Step Two: SCHEMATIC REVIEW

This review is intended to secure agreement on and approval of the basic development concept prior to extensive design development. At this stage, the developer submits schematic project materials requested by the BRA. BRA staff reviews the proposal and recommends revisions. The schematic design is subject to environmental review to determine

microclimate and other impacts, and, if necessary, the project is changed to mitigate adverse impacts. During the schematic stage, various environmental impacts will be assessed, especially traffic, wind, sunlight and daylight. For large-scale projects, a draft environmental impact assessment report may be required. Simultaneously, the Boston Civic Design Commission (BCDC) reviews schematic designs to make recommendations to the Mayor and the BRA as to the Commission's approval, need for modification or further review, or disapproval of the plans. If two-thirds of the Commission votes to disapprove of the schematic design, a redesign is required. Acceptance by BRA staff and BCDC of the schematic design initiates the next stage of review.

Step Three: DESIGN DEVELOPMENT

The third phase of review is intended to secure agreement on and approval of the final design prior to extensive and detailed work on the working drawings. At this stage, financing mechanisms are refined. Applications for government subsidy programs are prepared for publicly supported projects. ISD staff shall join in the review process at this stage.

The developer submits design development materials as requested by the BRA and ISD. The materials are reviewed by BRA and ISD staff and, if necessary, modifications are requested. A final environmental review is conducted and a final environmental impact assessment report may be required.

At this stage, the BRA Board acts on development proposals to recommend appropriate zoning actions to the Zoning Commission and Board of Appeal, and to designate or recommend developers for public property. The public is invited to comment on projects. Based on BRA and ISD staff analyses and public comments, the Board recommends appropriate actions to other government entities and/or grants final designation of developers for BRA property. The timing of BRA Board actions with respect to the final designation of developers may vary. If final designation precedes any aspect of review, the developer is nonetheless bound to complete all requirements prior to the BRA's approval of contract documents.

The Zoning Commission and Board of Appeal consider the BRA's recommendations in their decisions. The Board of Appeal may condition its approval of a requested zoning action on final design review by the BRA. (Zoning Procedures, a booklet which complements this one, outlines the stages of zoning review.)

Step Four: CONTRACT DOCUMENTS

Prior to the issuance of a building permit by the Inspectional Services Department, the BRA and ISD review final working drawings and the selection of all building materials visible to the public. This review is intended to secure final agreement on and approval of the contract documents and the complete proposal.

During preparation of the contract documents, it is the developer's responsibility to notify the Authority and secure its approval of all changes from the approved design development drawings that are contemplated for site improvements, exterior facades, roofscape and interior public spaces. Progress drawings representing 50% completion of the contract documents may be required for review by the Authority.

Once contract documents have been approved and construction has begun, the only items subject to additional review will be requests for change orders in the construction. The developer must request permission to make changes from approved drawings, which may not be undertaken until such approval has been obtained from the BRA and ISD. Site visits may be conducted to ensure construction of the project is in accordance with the contract documents. After review of the project by BRA staff, a certificate of completion will be approved by the Board, certifying that the project has been completed according to the terms of the Authority's tentative and final designations. A Certificate of Occupancy must be obtained from ISD prior to occupancy of the building.

BRA REVIEW AUTHORITY

A project may require BRA review for three reasons: a request for a building or occupancy permit that requires zoning relief, the use of financing mechanisms, or the leasing or disposition of public property. One or more of these reasons may be applicable to an individual project and will initiate review by the Authority.

1. ZONING REVIEW

Zoning review is initiated by a request for a building or occupancy permit. If the application complies with the Building and Zoning Codes and with other city requirements, a permit is issued by ISD. If a project plan does not comply with the Zoning Code, permission to deviate from the Code may be sought by an exception, variance, conditional use permit from the Board of Appeal after a formal letter of refusal is obtained from ISD. Following BRA staff review and Board recommendation, the Board of Appeal holds a public hearing and the zoning variance or conditional use permit may be approved.

Zoning Variances and Conditional Use Permits

To obtain a variance an applicant must demonstrate that special circumstances exist which make a property different from others in the district. The Zoning Code specifies which uses are conditional, as opposed to those which are specifically allowed or forbidden in a district. The applicant obtains a conditional use permit by demonstrating that the proposed use is suitable for its location and will not have a detrimental effect on the surrounding areas.

Special Zoning Designations

The Zoning Code defines several categories of special purpose overlay districts which include Planned Development Areas (PDAs) and Urban Renewal Areas (URAs) and Interim Planning Overlay Districts (IPODs). In these districts, the regulations specified for the base district apply, except when they are in conflict with the special regulations for a particular overlay district which then requires a special zoning designation. Special zoning designations require a zoning amendment in addition to other procedures and can be sought for PDAs and URAs.

o Planned Development Areas

PDA designation may be obtained for a project on a site of at least one acre. To effectuate a PDA designation, the BRA must approve a development plan, the Zoning Commission must adopt a map amendment, and the Board of Appeal must grant exceptions to the Zoning Code.

o Urban Renewal Subdistricts

An urban renewal subdistrict designation is only allowed within an already approved urban renewal project area. It is available only after the BRA is assured the proposal's zoning map amendment conforms with the area's urban renewal plan and with the specific requirements for development of the particular subdistrict.

o Interim Planning Overlay Districts

An Interim Planning Overlay District is a zoning mechanism used to control development while changes to the Zoning Code are being reviewed and debated. IPODs will prohibit the construction of new buildings inconsistent with the proposed Zoning Code changes.

The interim overlay zoning stays in place for only a limited time. If, during the interim period, the original zoning is changed, then the new zoning will control development at the end of the interim period. If no change occurs, the zoning reverts to the previously existing zoning.

Development Impact Projects

A request for a variance, conditional use permit, exception, and zoning map or text amendment triggers the need for Development Impact Project approval if the project is 100,000 square feet or more of commercial space. Developers of such projects are required to make a development impact payment to the Neighborhood Housing Trust or to contribute to the creation of low and moderate-income housing in the city.

Development Impact Project (DIP) Plans must be submitted to the BRA for staff review, and subsequently presented to the BRA Board at a public hearing. If the Board approves the plans, the developer enters into a Development Impact Project Exaction Agreement with the BRA. Under the requirements of the city's Zoning Code, the Board of Appeal and the Zoning Commission can not approve a project until the Authority certifies that a DIP Agreement has been executed.

2. REVIEW OF FINANCING MECHANISMS

The BRA has review authority for three types of financing mechanisms to be used to allow developments which provide public benefits to the city. These financing mechanisms include Chapter 121A, Commercial Area Revitalization Districts (CARDs), and Urban Development Action Grants (UDAGs).

Chapter 121A

Under M.G.L., Chapter 121A and Chapter 652 of the Acts of 1960, the BRA, with the approval of the Mayor, has the power to approve applications for the formation of non-profit, limited dividend or cooperative entities for the purpose of redevelopment in a blighted, open, decadent or substandard area. Chapter 121A essentially offers a tax incentive to build in a blighted area.

Chapter 121A provides for 15 years exemption from taxation on real and personal property. The corporation instead pays a Section 10 excise tax of 5 percent of gross income and \$10 per \$1000 of fair cash valuation to the Commonwealth of Massachusetts. Section 6A payments agreed upon by the corporation and the city are paid directly to the city. Following a BRA staff review, public hearing, and BRA Board approval, the application goes to the Mayor for approval.

Commercial Area Revitalization District

The BRA is responsible for administering the state-assisted grant program, Commercial Area Revitalization District (CARD). Through the CARD program, economic development incentives are made available to commercial and industrial enterprises for development projects and the leasing of new facilities.

To be eligible, a development project or leasing program must be located in a CARD. A CARD may be located in either neighborhoods or the downtown core. The incentives for commercial enterprises to locate in a CARD include below market interest rate Industrial Revenue Bonds, mortgage insurance on a portion of the total project financing, and a net income deduction and tax credit to be applied to state corporate excise taxes which are owed by a commercial enterprise certified as an eligible business facility by the State Job Incentive Bureau.

As the city planning agency, the BRA conducts a financial analysis to determine if the project requires an Industrial Revenue Bond to be economically feasible and if it fits into the CARD plan. Following staff review and approval, a letter of approval is sent to the Boston Industrial Development Finance Agency which issues and approves the Industrial Revenue Bond.

Urban Development Action Grants

An Urban Development Action Grants (UDAG) is a financing mechanism which assist developments requiring public assistance by supplementing the private investment. UDAGs are primarily used for leveraging private investment and job creation. To be eligible for a UDAG, the project must have definitive financial commitment by a private investor and must include housing and community development or economic activity. City of Boston policy stipulates that UDAG funds are made as loans rather than grants. The loan repayments are used for neighborhood economic development projects throughout the city.

The BRA plays a strong role in UDAGs in design and environmental review and the preparation of the UDAG proposal. The City Council gives final approval, prior to the Department of Housing and Urban Development submission.

3. REVIEW FOR THE LEASING AND DISPOSITION OF PUBLIC PROPERTY

The selling or leasing of public property may initiate development review by the BRA. For certain BRA and city-owned parcels, the BRA prepares developer kits which outline design and development guidelines. To formulate guidelines for some parcels, the BRA seeks the assistance of community groups and the Boston Society of Architects. The BRA then makes a request for proposals and reviews the submissions received. A tentative designation is recommended for the most appropriate proposal. The proposal is then subject to the extensive review process described on pages 2-4, similar to that of privately-initiated projects. At its completion, the developer is granted final designation.

SUBMISSION REQUIREMENTS

Following is a comprehensive list of BRA submission requirements. Developers of large projects, typically those greater than 100,000 square feet in size, would be required to provide much of this information. Smaller proposals would provide only the information appropriate to their context and complexity, as defined by the BRA. Financing mechanisms, such as Chapter 121A, CARD, and UDAG programs, have additional requirements which are defined in other booklets. ISD requirements may be obtained from that department.

In addition to full-size scale drawings, 5 copies of a bound booklet containing all submission materials reduced to size 8½ x 11, except where otherwise specified, are required. For projects to be reviewed by the Boston Civic Design Commission, 10 booklets containing the applicant information and the design submission materials are required.

I. Applicant Information

A. Development Team

1. Names
 - a. Developer (including description of development or Chapter 121A entity)
 - b. Attorney
 - c. Project consultants
2. Business address and telephone number for each
3. Designated contact for each
4. Description of current or formerly-owned developments in Boston

B. Legal Information

1. Legal judgements or actions pending concerning the proposed project
2. History of tax arrears on property owned in Boston by development team
3. Property Title Report including current ownership and purchase options of all parcels in the development site

II. Financial Information

(See Appendix 1 for sample forms.)

- A. Full disclosure of names and addresses of all financially involved participants and bank references
- B. Nature of agreements for securing parcels not owned by prospective developer

- C. Development Pro Forma
- D. Operating Pro Forma
- E. Sales Pro Forma
- F. Additional financial information pertinent to Chapter 121A, CARD, and UDAG applications

III. Project Area

- A. Description of metes and bounds of project area
- B. For Chapter 121A, CARD, UDAG, statements of fact establishing the need and rationale for such a designation (as required in their procedures)

IV. Relocation Information

- A. Statement by applicant concerning applicability to project of any Federal or State Relocation Regulations, and Citation of Regulations believed applicable
- B. If Chapter 121A, 121B or Chapter 79A is applicable then a statement is required that relocation information and relocation plan will be submitted under separate cover in accordance with Chapter 121A, 121B or Chapter 79A requirements.
- C. For projects not covered by federal or state programs containing relocation regulations, the following information:
 - 1. Number of units in building(s) to be demolished or vacated
 - 2. Number of occupied units, by type, per building
 - 3. Tenure of occupants (owner/tenant/sub-tenant)
 - 4. Name and address of each occupant (owner or prime tenant)
 - 5. Information on size and monthly costs:
 - a. Residential unit - number of rooms, bedrooms, and monthly rent, indicating included utilities
 - b. Non-residential - gross square feet of area, number of floors, including ground floors and monthly rent, indicating included utilities
 - 6. Length of occupancy of current occupant in unit (and building if greater)
 - 7. Estimate of the total number of small businesses
 - 8. Number, if any, of minority households or businesses displaced

9. Net increase or decrease in number of units:
 - a. Total number of housing units proposed
 - b. Reduction in rent controlled units

V. Project Design

A. Phase I Submission: Project Schematics

1. Written description of program elements and space allocation for each element
2. Neighborhood plan and sections at an appropriate scale (1" = 50' or larger) showing relationships of the proposed project to the neighborhood's:
 - a. massing
 - b. building height
 - c. scaling elements
 - d. open space
 - e. major topographic features
 - f. pedestrian and vehicular circulation
 - g. land use
3. Black and white 8"x10" photographs of the site and neighborhood
4. Sketches and diagrams to clarify design issues and massing options
5. Eye-level perspective (reproducible line drawings) showing the proposal in the context of the surrounding area
6. Aerial views of the project
7. Site sections at 1" = 20' or larger showing relationships to adjacent buildings and spaces
8. Site plan at an appropriate scale (1" = 20' or larger) showing:
 - a. General relationships of proposed and existing adjacent buildings and open space
 - b. Open spaces defined by buildings on adjacent parcels and across streets

- c. General location of pedestrian ways, driveways, parking, service areas, streets, and major landscape features
 - d. Pedestrian, handicapped, vehicular and service access and flow through the parcel and to adjacent areas
 - e. Survey information, such as existing elevations, benchmarks, and utilities
 - f. Phasing possibilities
 - g. Construction limits
9. Massing model at 1" = 100' for use in the Authority's downtown base model.
 10. Drawings at an appropriate scale (e.g., 1" = 8') describing architectural massing, facade design and proposed materials including:
 - a. Building and site improvement plans
 - b. Elevations in the context of the surrounding area
 - c. Sections showing organization of functions and spaces
 11. Preliminary building plans showing ground floor and typical upper floor(s)
 12. Proposed schedule for submission of design development materials

B. Phase II Submission: Design Development

1. Revised written description of project
2. Revised site sections
3. Revised site plan showing:
 - a. Relationship of the proposed building and open space to existing adjacent buildings, open spaces, streets, and buildings and open spaces across streets
 - b. Proposed site improvements and amenities including paving, landscaping, lighting and street furniture
 - c. Building and site dimensions, including setbacks and other dimensions subject to zoning requirements
 - d. Any site improvements or areas proposed to be developed by some other party (including identification of responsible party)

- e. Proposed site grading, including typical existing and proposed grades at parcel lines
- 4. Dimensioned drawings at an appropriate scale (e.g., 1" = 8') developed from approved schematic design drawings which reflect the impact of proposed structural and mechanical systems on the appearance of exterior facades, interior public spaces, and roofscape including:
 - a. Building plans
 - b. Preliminary structural drawings
 - c. Preliminary mechanical drawings
 - d. Sections
 - e. Elevations showing the project in the context of the surrounding area as required by the Authority to illustrate relationships or character, scale and materials
- 5. Large-scale (e.g., 3/4" = 1'-0") typical exterior wall sections, elevations and details sufficient to describe specific architectural components and methods of their assembly
- 6. Outline specifications of all materials for site improvements, exterior facades, roofscape, and interior public spaces
- 7. A study model at an appropriate scale (e.g., 1" = 16', or as determined after review of schematic design) showing refinements of facade design
- 8. Eye-level perspective drawings showing the project in the context of the surrounding area
- 9. Samples of all proposed exterior materials
- 10. Complete photo documentation (35 mm color slides) of above components including major changes from initial submission to project approval

C. Phase III Submission: Contract Documents

- 1. Final written description of project
- 2. A site plan showing all site development and landscape details for lighting, paving, planting, street furniture, utilities, grading, drainage, access, service, and parking
- 3. Complete architectural and engineering drawings and specifications
- 4. Full-size assemblies (at the project site) of exterior materials and details of construction

5. Eye-level perspective drawings or presentation model that accurately represents the project, and a rendered site plan showing all adjacent existing and proposed structures, streets and site improvements
6. Site and building plan at 1" = 100' for Authority's use in updating its 1" = 100' photogrammetric map sheets

D. Phase IV Submission: Construction Inspection

1. All contract addenda, proposed change orders, and other modifications and revisions of approved contract documents which affect site improvements, exterior facades, roofscape, and interior public spaces shall be submitted to the Authority prior to taking effect.
2. Shop drawings of architectural components which differ from or were not fully described in contract documents

VI. BRA Environmental Impact Assessment

Whether or not a project comes within the purview of the Massachusetts Environmental Policy Act review requirements, the BRA may request all or several of the environmental analyses listed below. The extent of analyses required depends on the size, location, and complexity of the project.

A. Transportation Impacts/Access Plan

1. Parking
 - a. Number of spaces provided indicating public and private allocation
 - b. Reduction in parking from previous use of site
 - c. Proposal's impact on demand for parking
 - d. Parking plan, including layout, access, and size of spaces
 - e. Evidence of compliance with City of Boston parking freeze requirements
2. Loading
 - a. Number of docks
 - b. Location and dimension of docks
3. Access
 - a. Size and maneuvering space on-site or in public right-of-way

- b. Access, curb cuts, and/or sidewalk changes required
- 4. Vehicular Traffic
 - a. Project vehicular traffic demand and generation (daily and peak-hours) and distribution
 - b. Circulation and access impacts on the local and regional street system and local intersections (traffic impact area), including capacity and level-of-service analyses
 - c. Modal split and vehicle occupancy analysis
- 5. Public Transportation
 - a. Location and availability of public transportation facilities
 - b. Usage and capacity of existing system
 - c. Peak-hour demand and capacity analysis
 - d. Measures to encourage use of public transportation
- 6. Pedestrian Circulation
 - a. Demand and capacity analysis on project area sidewalks
 - b. Connections to public transportation station stops
 - c. Effect on pedestrian flows of project parking and servicing entrances and exits
- 7. Access Plan
 - a. Measures to manage parking demand and optimize use of available parking spaces, including:
 - o Proposed rate structures(s)
 - o Ride-sharing incentives and information dissemination
 - o Set-asides for high-occupancy-vehicles: number and location
 - o Set-asides for after morning commuter peak (usually 9:30 or 10:00 a.m.)
 - b. Measures to encourage public transportation use, including:
 - o Mass transit information dissemination
 - o MBTA pass sales and subsidies
 - o Direct station links or pedestrian connections

- c. Measures to reduce peaking, including:
 - o Encouragement of flexible work hours
 - o Restrictions on service and good deliveries
- d. Measures to mitigate construction impacts, including:
 - o Time and routes of truck movements
 - o Storage of materials and equipment
 - o Worker parking and commuting plan
- e. Monitoring and reporting measures

B. Wind

Information on pedestrian level winds is required during the schematic design stage for build and no-build conditions. Wind tunnel testing will be required for:

- a. Any building higher than 150 feet
- b. Any building 100 feet high and two times higher than the adjacent buildings
- c. Other buildings which fall below these thresholds, but because of their context and particular circumstances would require wind tunnel testing

Particular attention shall be given to public and other areas of pedestrian use (sidewalks, plazas, building entrances, etc.) adjacent to and in the vicinity of the project site.

1. Wind tunnel testing is to be conducted in two stages - Stage I Qualitative Study and Stage II Hot Wire Testing. For Stage I, an erosion study (or equivalent methodology) must be conducted to determine potential problem areas and to identify appropriate placement of sensors for hot wire testing.
2. Wind tunnel testing should be conducted according to the following criteria:
 - a. Results of wind tunnel testing should be consistently presented in miles per hour (mph).
 - b. Velocities should be measured at a scale equivalent to 6 feet above ground level.
 - c. The instrument should have a frequency response that is flat to 100 hertz and filters out any higher frequency (hot wire testing).
 - d. The expected one percent occurrence of hourly average, effective gust, and peak gust velocities should be reported (hot wire testing).

- e. Erosion study data shall be presented in tabular form and graphically through photographs showing changes between build and no-build conditions.
 - 1. Wind directions from the sixteen compass points shall be used noting the percent or probability of occurrence of each direction on a seasonal and annual basis.
 - 2. Wind velocities for each direction shall include the intervals: 0-15 mph and every 5 mph interval from 15 to 40 mph inclusive.
 - 3. For each ground station tested, data shall include, in addition to the annualized 1% occurrence of wind speeds, the 1% wind velocities for each of the four seasons of the year and the percentile contribution of the 1% wind velocity from each of the 16 wind directions.
- f. Hot wire data shall be presented both in tabular form and graphically on a map to indicate velocity changes between build and no-build conditions.
 - 1. The effective gust velocity can be computed by the formula: average hourly velocity plus $1.5 \times \text{root mean square (rms) variations about the average}$.
 - 2. Analysis should be presented as follows:
 - a. Present data for existing (no-build) and future build scenarios as follows:
 - Mean velocity (exceeded 1% of time)
 - Effective gust velocity (exceeded 1% of time)
 - b. Compare mean and effective gust wind speeds on both annual and seasonal basis, by wind direction.
 - c. Provide a written descriptive analysis of wind environment and impacts for each sensor point including such items as source of winds, direction, seasonal variations, etc., as applicable. Include analysis of suitability of location for various activities (e.g., walking, sitting, eating, etc.) as appropriate.
 - d. Provide maps of sensor locations with wind speed data, graphically indicating changes in wind speeds.

3. For areas where wind speeds are projected to exceed acceptable levels, measures to reduce wind speeds and mitigate potential adverse impact shall be identified.

C. Shadow (Information should be provided during the schematic design stage.)

1. Shadow analysis plans should be submitted at a scale of 1' = 40' and 1" = 100'.
2. Shadow impact analysis must include net new shadows as well as existing shadows.
3. Initial shadow analyses must include shadow impacts for build and no-build conditions for the hours 9:00 a.m., 12:00 noon, and 3:00 p.m. conducted for four periods of the year at the vernal equinox, autumnal equinox, winter solstice, and summer solstice.
4. Shadow analyses also are to be conducted at 10:00 a.m., 11:00 a.m., 12:00 noon, 1:00 p.m., and 2:00 p.m. on October 21 and November 21, and must show the incremental effects of the proposed massing on proposed or existing public spaces including major pedestrian areas.
5. Additional shadow analyses may be required depending on the particular physical characteristics of the site including its solar orientation relative to public open spaces, pedestrian patterns and street patterns, and existing shadows in the area.

D. Daylight (Information should be provided during the schematic design stage.)

1. Daylight analysis for build and no-build should be conducted by measuring the percentage of skydome that is obstructed by a building.
 - a. Specific technique and graphic methodologies required for determining percent of obstructed skydome will be provided by the BRA.

E. Excavation and Landfill

1. Written description including amount and method of excavation, dredging and filling proposed, and the existence of blasting and pile driving
2. Analysis of sub-soil conditions, potential for ground movement and settlement during excavation, and impact on adjacent buildings and utility lines

F. Groundwater

1. List of measures used to ensure the groundwater levels will not be lowered during or after construction, if applicable
2. Engineering analysis of the impact of development on groundwater, surrounding structures, wooden piles and foundations

G. Solid and Hazardous Wastes/Materials

1. A list of any known or potential contaminants on site together with evidence of the recording with the Registry of Deeds of the disposal of hazardous wastes on the site, pursuant to the M.G.L., Chapter 21C, if applicable
2. Possible hazardous wastes generated
3. Existence of buried gas tanks on site
4. Estimate of potential trash generation and plans for disposal

H. Noise

1. Where appropriate, noise analyses to determine compliance with City of Boston regulations and applicable state and federal guidelines
2. For residential projects, evaluation of ambient noise levels to determine conformance with the Design Noise Levels established by the U.S. Department of Housing and Urban Development.

I. Flood Hazard Zone/Wetlands

1. Where appropriate, determination of whether or not proposal falls within a Federal Flood Hazard Zone or requires a Wetlands Permit
2. If applicable, description of measures to minimize potential flood damage and to comply with city and federal flood hazard regulations and any Order of Conditions issued by the Boston Conservation Commission

J. Construction Impacts

1. Description of construction staging areas
2. Availability of construction worker parking
3. Potential dust generation and mitigation measures to control dust emissions
4. Permits from Air Pollution Control Commission for sand blasting, if appropriate

5. Potential noise impact and measures to minimize noise levels
6. Truck traffic and access routes
7. Pedestrian safety

K. Historical Landmarks

1. Description of the project site location in proximity to a National or Massachusetts Register site or district or Landmark designated by the Boston Landmarks Commission
2. Identification of Boston Landmarks Commission ratings for existing buildings.
3. Possible effects to the National or Massachusetts Register site or district or a Landmark designated by the Boston Landmarks Commission

L. Air Quality

1. Impact on local air quality from additional traffic generated by the project, including identification of any location projected to exceed national or Massachusetts air quality standards
2. Estimation of emissions from any parking garage constructed as part of the project
3. Description and location of building/garage air intake and exhaust systems and evaluation of impact on pedestrians
4. For residential projects, evaluation of the ambient air quality to determine conformance with the National Ambient Air Quality Standards established by the U.S. Environmental Protection Agency.

M. Utility Systems

1. Estimated water consumption and sewage generation from the project
2. Description of the capacity and adequacy of water and sewer systems and an evaluation of the impacts of the project on these systems
3. Identification of measures to conserve resources, including any provisions for recycling

N. Energy

1. Description of energy requirements of the project and evaluation of project impacts on resources and supply

2. Description of measures to conserve energy usage and consideration of feasibility of including solar energy provisions

O. Water Quality

1. Description of impacts of the project on the water quality of Boston Harbor or other water bodies that could be affected by the project, if applicable
2. Description of mitigation measures to reduce or eliminate impacts on water quality

P. Solar Glare

1. Analysis of solar glare impact and solar heat gain analysis, if applicable

VII. Affirmative Housing Plan

Applicants for city-owned land; city, state, or federal funds administered by a city agency; or zoning relief to construct housing may be required to submit an Affirmative Housing Plan and to adhere to fair housing requirements outlined in Appendix 2. The plan should include the following:

- A. Description of affirmative marketing techniques
- B. Description of owner/tenant selection process
- C. Proposed owner/tenant profile indicating number of units dedicated to community residents, minorities, female-headed households, and low-moderate income people

VIII. Employment Plan

Boston Jobs Policy (Appendix 3) requires that publicly-assisted and large-scale private commercial projects hire Boston residents, minorities, and women for construction jobs for 50, 25, and 10 percent respectively of the person-hours worked. In addition, developers may be requested to submit permanent employment plans intended to meet a goal that the profile of permanent employees in the building include Boston residents (50 percent), minorities (30 percent), and women (50 percent). Submission materials may include the following:

- A. Estimated number of construction jobs
- B. Estimated number of permanent jobs
- C. Plan for meeting Boston Resident Construction Jobs Standards
- D. Plan for meeting Boston Resident Permanent Jobs Standards
- E. Plan for meeting Minority Business Employment Goals of city contracts or state and federal regulations and policies

IX. Public Benefits

- A. Development Impact Project exaction, specifying amount and method of linkage contribution (housing payment or housing creation)
- B. Increase in tax revenues, specifying existing and estimated future annual property taxes
- C. Childcare plan
- D. Other public benefits

X. Regulatory Controls and Permits

- A. Existing zoning requirements, calculations, and any anticipated zoning requests
- B. Anticipated permits required from other local, state, and federal entities with a proposed application schedule
- C. For structures in National or Massachusetts Register Districts or sites individually listed on the National or Massachusetts Register of Historic Places, duplicates of parts I and II of the certification documents and applicable correspondence and permits
- D. For projects requiring compliance with the Massachusetts Environmental Policy Act (MEPA), copies of the Environmental Notification Form, Certificate of the Secretary of Environmental Affairs, and Environmental Impact Report, if required
- F. Other applicable environmental documentation

XI. Community Groups

- A. Names and addresses of project area owners, displacees, abutters, and also any community groups which, in the opinion of the applicant, may be substantially interested in or affected by the proposed project
- B. A list of meetings proposed and held with interested parties

FEES

The following is a list of fees for development projects. Most fees are not refundable except fees for reviewing developers' proposals for public parcels, which are partially refundable to unsuccessful applicants.

Bid Documents

o Site Preparation Contracts	\$ 100
o Property Management Contracts	\$ 100
o Operation of Parking Lots	\$ 100
o Rehabilitation Documents	\$ 100
o Demolition Contracts*	\$ 100

Chapter 121A Fees

o Application	\$ 5,000
o Amendments of application requiring a hearing and report	\$ 3,500
o Amendments of any kind not requiring a hearing	\$ 2,500

<u>CARD Project Review Fees</u>	\$ 2,500
---------------------------------	----------

<u>Developer Kits</u>	\$ 0-100 (varies depending on size of site and proposed development)
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<u>Developer Proposal Fees</u>	\$ 0-7,500 (varies depending on site)
--------------------------------	--

Zoning Commission Fees

o Annual subscription to Zoning Code Amendments	\$ 10
o Annual subscription to Zoning Code Amended Pages	\$ 10
o Zoning Code Text or Map Amendment Application	\$ 225 (Advertising costs will also be paid by proponent and will vary according to length of ad)

Note: Fees for zoning and building code variances and appeals are paid directly to the Board of Appeal.

*Refundable

APPENDICES

Appendix 1
PRO FORMAS

Project _____
Developer _____

Date _____
Tel. #/Contact Person _____

COMMERCIAL DEVELOPMENT PROGRAM

TOTAL LAND SQUARE FOOTAGE _____

TOTAL GROSS SQUARE FOOTAGE _____

Office _____

Retail _____

Other (please specify) _____

Parking (if applicable) _____

TOTAL NET SQUARE FOOTAGE _____

Office _____

Retail _____

Other (please specify) _____

HOTEL DEVELOPMENT PROGRAM

TOTAL LAND SQUARE FOOTAGE _____

TOTAL GROSS SQUARE FOOTAGE _____

Hotel GSF _____

No. Rooms _____

Parking _____

No. Spaces _____

RESIDENTIAL DEVELOPMENT PROGRAM

FORM OF OWNERSHIP
(Rental, Condominium, Cooperative) _____

TOTAL LAND SQUARE FOOTAGE _____

TOTAL UNITS _____

Mix of Units _____

Studio _____

1 Bed _____

2 Bed _____

Other _____

PARKING _____ spaces

TOTAL GROSS SQUARE FOOTAGE _____ GSF _____ NSF

Average Unit Size

Studio _____ GSF _____ NSF

1 Bed _____ GSF _____ NSF

2 BED _____ GSF _____ NSF

Other _____ GSF _____ NSF

Parking _____ GSF

Project _____
Developer _____

Date _____
Tel. #/Contact Person _____

COMMERCIAL DEVELOPMENT PRO FORMA

(Estimates in 19__ Dollars)

TOTAL HARD COSTS \$ _____
Rehabilitation (\$_____/GSF) \$ _____
New Construction (\$_____/GSF) _____
Parking (\$_____/space) _____
Site Improvements (\$_____/LSF) _____
Tenant Improvements _____
Office \$_____/NSF _____
Retail \$_____/NSF _____

TOTAL SOFT COSTS \$ _____
Architect/Engineering _____
Marketing/Brokerage/Advertising _____
Developer's Fee _____
Legal _____
Permits & Fees (specify) _____
Construction Loan Interest _____
(____ mos. @ ____% with average
balance of \$_____) _____
Financing Fees (specify) _____
Real Estate Taxes and Linkage _____
during Construction (____ mos.) _____
Lease Payment * _____
Other Related Costs _____
(specify) _____

CONTINGENCY (____% of hard costs) \$ _____

TOTAL DEVELOPMENT COST \$ _____

Soft Costs as % Hard Costs _____
Soft Costs as % Total Development Cost _____
Total Development Cost/GSF _____

* If applicable

Project _____
Developer _____

Date _____
Tel. #/Contact Person _____

COMMERCIAL OPERATING PRO FORMA

(Carry out of 10 years and indicate inflation factor)

COMMERCIAL INCOME

Office (_____ NSF @ \$ _____ /NSF) \$ _____
Retail (_____ NSF @ \$ _____ /NSF) _____
Parking (attach parking rate structure) _____
Other (_____ NSF @ \$ _____ /NSF) _____

POTENTIAL GROSS INCOME \$ _____

VACANCY (_____ %) \$ (_____)

EFFECTIVE GROSS INCOME \$ _____

OPERATING EXPENSES

Office (\$ _____ /NSF) \$ _____
Retail (\$ _____ /NSF) _____
Parking (\$ _____ /space) _____
Other (\$ _____ /NSF) _____
TOTAL \$ (_____)

REAL ESTATE TAXES

Office (\$ _____ /NSF) \$ _____
Retail (\$ _____ /NSF) _____
Parking (\$ _____ /space) _____
Other (\$ _____ /NSF) _____
TOTAL \$ (_____)

LINKAGE PAYMENTS \$ (_____)

NET OPERATING INCOME \$ _____

DEBT SERVICE (_____ % on \$ _____ for _____ years) \$ (_____)

CASH FLOW \$ _____

EQUITY PARTICIPATION (if applicable) \$ _____

RETURN ON EQUITY (year of operations 19__) _____ %
(Before Tax Cash Flow/Equity)

RETURN ON TOTAL DEVELOPMENT COST (year of operations 19__) _____ %
(Net Operating Income/Total Development Cost)

Project _____
Developer _____

Date _____
Tel. #/Contact Person _____

HOTEL DEVELOPMENT PRO FORMA
(Estimates in 19__ Dollars
Using __% Inflation Factor from 19__)

TOTAL HARD COSTS		\$ _____
Hotel (\$_____/NSF)	_____	
per room (\$_____/room)	_____	
Parking (\$/space)	_____	
Site Costs (\$_____/GSF)	_____	
Office (\$_____/GSF)	_____	
Retail (\$_____/GSF)	_____	
Other (specify)	_____	
TOTAL SOFT COSTS		\$ _____
Architect/Engineering	_____	
Legal	_____	
Accounting	_____	
Marketing/Brokerage	_____	
Financing Fees (specify)	_____	
Developer's Fee	_____	
Construction Loan Interest	_____	
(__ Mos __% on average balance		\$ _____
of \$	_____	
Land Lease Payment *	_____	
Real Estate Taxes and Linkage	_____	
Other Related Fees (specify)	_____	
HOTEL START-UP		\$ _____
Furniture, Fixtures & Equipment	_____	
Initial Invent. & Working Capital	_____	
Pre-Opening & Opening Costs	_____	
TOTAL START-UP COSTS		\$ _____
CONTINGENCY COSTS (____% of Hard Costs)		\$ _____
TOTAL DEVELOPMENT COSTS		\$ _____
Soft Costs as % Hard Costs	_____	
Soft Costs as % TDC	_____	

* If applicable

Project _____
Developer _____

Date _____
Tel. #/Contact Person _____

HOTEL OPERATING PRO FORMA
(Carry out 10 years and include inflation factor)

ROOMS

Available _____
Average Occupancy (____%) _____
Average Rate (\$____) \$ _____

REVENUE

Rooms \$ _____
Food & Beverage _____
Telephone _____
Rentals _____
Parking _____
Other _____

TOTAL GROSS REVENUE \$ _____
Vacancy _____
EFF. GROSS REVENUE (\$ _____)

EXPENSES

Food & Beverage Costs \$ _____
Payroll & Related _____
Telephone _____
Other Expenses _____
Linkage Payment _____

TOTAL ALLOCATED EXPENSES (\$ _____)

UNALLOCATED EXPENSES

Admin. & General \$ _____
Management Fee _____
Marketing _____
Energy Costs _____
Property & Maintenance _____
Franchise Fees _____
Guest Entertainment _____
Replacement Reserves _____

TOTAL UNALLOCATED EXPENSES (\$ _____)
TOTAL EXPENSES (\$ _____)

PROPERTY TAXES & OTHER
MUNICIPAL CHARGES (specify) (\$ _____)

INSURANCE ON BUILDING
AND CONTENTS (\$ _____)

NET OPERATING INCOME \$ _____

DEBT SERVICE ____% on \$ _____ for ____ yrs. (\$ _____)

BEFORE TAX CASH FLOW \$ _____

Project _____
Developer _____

Date _____
Tel. #/Contact Person _____

HOTEL OPERATING PRO FORMA continued
(Carry out 10 years and include inflation factor)

EQUITY PARTICIPATION (if applicable) \$ _____

RETURN ON EQUITY (year of operations 19__) _____ %
(Before Tax Cash Flow/Equity)

RETURN ON TOTAL DEVELOPMENT COST _____ %
(Year of operations 19__)
(Net operating Income/Total Development Cost)

Project _____
Developer _____

Date _____
Tel. #/Contact Person _____

RESIDENTIAL CONDOMINIUM DEVELOPMENT PRO FORMA

(Estimates in 19__ Dollars)

(Provide phased information where necessary)

TOTAL HARD COSTS

\$ _____

Condominium Units (\$ _____/GSF) \$ _____
Unit Finishes (\$ _____/NSF) _____
Condominium Parking (\$ _____/GSF) _____
(# of spaces) _____
Site Costs (\$ _____/GSF) _____
Premium Costs (\$ _____/GSF) _____
Other (specify) _____

TOTAL SOFT COSTS

\$ _____

Architect/Engineering _____
Marketing/Brokerage/Advertising _____
Developer's Fee \$ _____
Legal _____
Permits & Fees (specify) _____
Construction Period Costs _____
Construction Loan Interest
(_____ mos. @ _____ % with
average balance of
\$ _____) _____
Financing Fees _____
Real Estate Taxes and Linkage
during Construction (_____ mos.) _____

Sale Period Costs \$ _____
Loan Interest
(_____ mos. @ _____ % with
average balance of
\$ _____) _____
Sale Period Real Estate Taxes
(_____ mos.) _____
Sale Period Operating Expenses _____
Other (specify) _____
Other Related Costs (specify) \$ _____

CONTINGENCY (_____ % of \$ _____) \$ _____

TOTAL CONDOMINIUM DEVELOPMENT COSTS

\$ _____

Soft Costs as % Hard Costs _____
Soft Costs as % TDC _____

Project _____
Developer _____

Date _____
Tel. #/Contact Person _____

CONDOMINIUM SALES PRO FORMA
(Estimates in 19__ Dollars)
(Using __% inflation factor from 19__)

CONDOMINIUM UNITS

Gross Sales Proceeds	\$ _____
Gross Condominium Sales/NSF	\$ _____
Less Total Condominium Units Development Cost	(_____)
Total Condominium Units Cost/NSF	\$ _____
Net Profit (Before Taxes)	_____
Return on Gross Sales Proceeds	_____ %
(Net Profit/Gross Sales Proceeds)	

CONDOMINIUM PARKING SPACES

Gross Sales Proceeds	\$ _____
Gross Parking Sales/Space	\$ _____
Less Total Condominium Parking Development Cost	(_____)
Total Parking Cost/Space	\$ _____
Net Profit (Before Taxes)	\$ _____
Return on Gross Sales Proceeds	_____ %
(Net Profit/Gross Sales Proceeds)	

TOTAL SALES

Total Condominium Gross Sales Proceeds	\$ _____
Less Total Condominium Development Costs	(_____)
Net Profit (Before Taxes)	\$ _____
Total Return on Gross Condominium Sales Proceeds	_____ %
(Net Profit/Total Gross Sales Proceeds)	
Return on Equity	_____ %
Equity Participation (Amount and % of Total Condominium Cost) \$ _____ (_____ %)	

Project _____
Developer _____

Date _____
Tel. #/Contact Person _____

CONDOMINIUM COST OF OWNERSHIP PRO FORMA
(Estimates in 19__ Dollars)
(Use __% inflation factor from 19__)

Number of Units _____

Average Unit Size (NSF) _____

Average Unit Price \$ _____

Average Downpayment \$ _____ (____%)

Studio _____

1 Bed _____

2 Bed _____

Other _____

	<u>Market</u>	<u>Subsidized</u>
Annual Common Area Charges (\$_____/NSF)	\$ _____	\$ _____
Annual Real Estate Taxes (\$_____/NSF)	_____	_____
Annual Mortgage Payment (____% on \$_____ for ____ years)	_____	_____
Annual Service Charges (please specify membership fees, special services, etc.)	_____	_____
Total Annual Cost of Ownership (Before-tax)	_____	_____
Total Monthly Cost of Ownership (Before-tax)	_____	_____

Project _____
Developer _____

Date _____
Tel. #/Contact Person _____

DEVELOPMENT PRO FORMA FOR RESIDENTIAL RENTAL PROPERTY
(Estimates in 19__ Dollars
Using __% Inflation Factor from 19__)

RESIDENTIAL UNITS

Number of Residential Units _____

Mix of Units

1 Bed _____
2 Bed _____
Other _____

Average Unit Size (GSF, NSF)

1 Bed _____
2 Bed _____
Other _____

Number of Parking Spaces _____

SQUARE FOOTAGE

Residential GSF _____
Parking GSF _____
TOTAL GSF _____

ACQUISITION

\$ _____

CONSTRUCTION COSTS

Rehabilitation (\$_____/GSF) \$ _____
New Construction (\$_____/GSF) _____
Parking (\$_____/space) _____
Site Improvements (\$_____/Land SF) _____
Other _____
TOTAL \$ _____

RELATED COSTS

\$ _____

Architect/Engineering _____
Marketing/Brokerage _____
Developer Fees _____
Miscellaneous Fees _____
(Legal, Acctg. Ins., Title) _____
Construction Loan Interest
(__mos. @ __% with average balance of
\$ _____)
Financing Fees (specify) _____
Other Related Costs _____
(please specify) _____

TOTAL

\$ _____

CONTINGENCY (____% of \$ _____)

\$ _____

TOTAL DEVELOPMENT COST (TDC)

\$ _____

Project _____
Developer _____

Date _____
Tel. #/Contact Person _____

OPERATING PRO FORMA FOR RESIDENTIAL RENTAL PROPERTY
(Carry out 10 years and indicate inflation factor)

RENTAL INCOME

Rent/Month

1 Bed _____
2 Bed _____
Other _____

TOTAL RESIDENTIAL INCOME \$ _____

PARKING INCOME (attach parking rate structure) \$ _____

MISCELLANEOUS INCOME (e.g., Laundry) \$ _____

POTENTIAL GROSS INCOME \$ _____

VACANCY (____%) (\$ _____)

EFFECTIVE GROSS INCOME \$ _____

OPERATING EXPENSES

Residential (\$_____/NSF) \$ _____
Parking (\$_____/space) _____
TOTAL OPERATING EXPENSES (\$ _____)

REAL ESTATE TAXES

Residential (\$_____/NSF) \$ _____
Parking (\$_____/space) _____
TOTAL REAL ESTATE TAXES (\$ _____)

BRA BASE RENT * (\$ _____)

NET INCOME AVAILABLE FOR DEBT SERVICE \$ _____

FINANCING **

Debt Service (____% on \$_____ for ____yrs.) (\$ _____)

CASH FLOW \$ _____

EQUITY PARTICIPATION (if applicable)

(Amount and % of Total Development Cost) \$ _____

RETURN ON EQUITY

(Cash Flow/Equity) _____%

RETURN ON TOTAL DEVELOPMENT COST

(Net Income Available/Total Development Cost) _____%

* If applicable

** Specify type and priority of repayment

Appendix 2 FAIR HOUSING REQUIREMENTS

Recognizing that underrepresentation of minorities or female heads of households in a particular neighborhood may itself discourage interest among those groups from living in that neighborhood, the city will undertake affirmative marketing efforts to ensure that the city's minorities and female heads of households have access to housing throughout the city.

These efforts will apply to all projects of five or more units (rental and home ownership projects) which receive exceptions to zoning requirements from the Boston Zoning Commission and those that receive any form of city financial assistance, or state or federal assistance which is administered by the city. Financial assistance shall include the donation or sale of city-owned land to facilitate the project.

Interagency Procedures

- a. When an application for one or more of the following is received:
(i) city-owned land; (ii) city, state or federal funds administered by a city agency; or (iii) zoning exception for the development of a housing project, the appropriate city agency shall notify the Boston Fair Housing Commission within thirty (30) days of receipt of the application.

The BFHC shall review the compliance record, if any, of all applicants. If the record shows that an applicant has unresolved issues of non-compliance, the Commission shall attempt to resolve these issues in accordance with its mediation and hearing procedures. In those cases where a compliance agreement cannot be reached, the BFHC shall recommend to the Mayor and the appropriate agency that the application be rejected. Where the applicant has received city land, or other city benefits, and has not complied with fair housing requirements, the Commission shall recommend to the Mayor and to the administering agency that the applicant be denied an occupancy permit for the project.

- b. The appropriate city agency shall advise developers of affirmative marketing requirements through program designs, Requests for Proposals and other forms of communication. Additionally, affirmative marketing requirements shall be specified in all housing and housing development contracts awarded or administered by city agencies.
- c. The BFHC shall assist the appropriate agency in developing project specific affirmative marketing plans.
- d. Developers shall be required to sign a non-discrimination statement.
- e. The BFHC shall monitor implementation of each affirmative fair housing market plan.
- f. The BFHC shall submit to the Mayor an annual report summarizing affirmative marketing efforts and accomplishments.

Elements of Affirmative Marketing Plan

a. Outreach Housing Efforts

Each developer, including city agencies, will be required to:

- (i) advertise availability of housing in majority and minority newspapers;
- (ii) send outreach letters to housing counselling agencies which assist low-moderate income families and minorities;
- (iii) undertake such additional efforts as may be required, due to the specific nature, or location of the project.

b. Neighborhood Preferences

To stabilize neighborhoods and mitigate the effects of displacement/gentrification, up to 70% of available affordable housing units may be targeted by a developer for neighborhood residents. This policy will work to prevent the gentrification of minority neighborhoods since a substantial proportion of city-owned land which will be used to produce affordable housing is located in minority neighborhoods. However, developers may not exclude people from other neighborhoods from applying and competing for all units. Plans for tenant selection where neighborhood preference is a criterion shall be approved by the BFHC.

c. Measures for Compliance

A developer who has taken every step outlined in a city-approved affirmative marketing plan shall be able to proceed with completion of his/her project. Compliance shall be determined by the BFHC. A developer who has not adequately complied with a city-approved marketing plan, however, shall be required to conduct additional outreach and/or may be subject to pre-determine remedies.

Appendix 3

BOSTON JOBS POLICY

1. Boston Resident Jobs Policy

Chapter 30 of the Ordinances of 1983 established a Boston Resident Jobs Policy. The 1983 ordinances requires contractors performing work on construction projects funded in whole or in part by the city or to which the city administers to ensure 50% Boston resident, 25% minority and 10% female participation of the total construction workhours performed on the project. To ensure compliance with these requirements, the City of Boston Supplemental Minority Participation and Resident Preference Contract provisions are included in all contracts for construction projects covered by the Ordinance. This contract supplement delineates the contractor's compliance obligations and a description of the city's monitoring and enforcement of the policy.

2. Executive Order Extending Jobs Policy

The July 12, 1985 Executive Order extends the Resident Jobs Policy ordinance to cover privately financed construction projects in excess of 100,000 square feet (excluding housing developments). The Executive Order includes the same hiring requirements and requires each developer to submit a detailed employment plan with provisions for monitoring, compliance and sanctions. The submission of the Boston Residents Construction Employment Plan is a required submission prior to the issuance of a building permit for the project.

3. Permanent Jobs Policy

The city has initiated a permanent jobs policy which requires developers receiving city assistance (i.e., loans, land or building acquisitions, lease agreements or licenses) for projects which are expected to generate permanent job opportunities, to enter into an employment agreement with the city. These agreements typically include the provisions for 50% Boston resident, 30% minority, and 50% female hiring in all new jobs generated and for the advanced notification of job opportunities to the city and/or community based organizations. Additional commitments negotiated through these agreements include financial contributions for job training and affirmative action activities. The city has begun negotiations with the developers for the privately financed projects to discuss similar types of permanent job agreements.

4. Boston Employment Commission

On September 10, 1986, the Boston City Council passed an ordinance establishing the Boston Employment Commission. This Commission will monitor employment practices mandated by earlier enacted jobs policies, and shall have the ability to impose sanctions for non-compliance. Compliance shall be verified by weekly accounts of all workers on a project, and by demonstrated good faith efforts. The board will consist of seven members, and will be representative of the interests of business, minorities, women, and organized labor.

Appendix 4

MASS. ENVIRONMENTAL POLICY ACT REVIEW AUTHORITY

The Massachusetts Environmental Policy Act (MEPA) requires the review and evaluation of projects to describe their environmental impact and establishes a process for determining when Environmental Impact Reports (EIRs) are required. MEPA applies to projects directly undertaken by a state agency (including leases and transfers of property undertaken by an agency) and to privately-initiated projects requiring an agency permit or receiving financial assistance from an agency. Because the BRA is a redevelopment authority created by the Legislature, it falls under the jurisdiction of MEPA. Where the BRA acts only as the planning department for the city, such as in zoning matters and the disposition of city-owned land, MEPA does not apply.

Regulations implementing MEPA were promulgated by the Executive Office of Environmental Affairs (EOEA), which is also responsible for determining whether a project requires an EIR. These regulations establish a process whereby, for non-exempt projects, an Environmental Notification Form (ENF) is required to be filed with EOEA for public and agency review as the preliminary step in determining the need for an EIR. For activities or actions undertaken by an agency, the preparation of the ENF (and of the EIR, if subsequently required) is the responsibility of the agency itself. For private projects seeking state or BRA financial assistance or a permit (e.g., Chapter 121A approval), the project proponent is responsible for preparing the required documents.

In addition to describing the environmental review process, the MEPA regulations also establish categories of projects which automatically require the preparation of an EIR (categorical inclusions) and which are automatically excluded from filing an ENF (categorical exclusions). Specific rules of application are included in the regulations.

With respect to timing, the public/agency review period for ENF's is 20 days following publication in EOEA's Environmental Monitor of a notice of submission and availability of an ENF. Notices are published twice monthly, on approximately the 7th and the 21st of the month. The Secretary of Environmental Affairs then has 10 days in which to issue a certificate stating whether or not an EIR is required.

If an EIR is required, the process involves the preparation and circulation for review of a Draft EIR (the public/agency review period is 30 days following EOEA notice of availability of the EIR, with seven additional days for the Secretary to issue a statement on the adequacy of the Draft), preparation of the Final EIR responding to comments on the Draft, and circulation of the Final (again, a 30-day review period followed by seven days for the Secretary to issue a statement regarding the adequacy of the Final and its compliance with MEPA). Normally, the EIR process from beginning of the preparation of the EIR to final approval takes five to six months and considerably longer for major and complicated projects. The minimum time would be at least four months.

DOWNTOWN OFFICE MARKET: RESEARCH WORK IN PROGRESS

[illegible]

DOWNTOWN OFFICE MARKET:
RESEARCH WORK IN PROGRESS

IV. BOSTON OFFICE MARKET: RESEARCH WORK IN PROGRESS

The Boston Redevelopment Authority's Research Department recently undertook a series of analyses to better understand and explain the dynamics of the Boston commercial real estate market. The products of these analyses have provided the Authority and the City with historical and prospective development data which contribute to the formation and implementation of growth management policies.

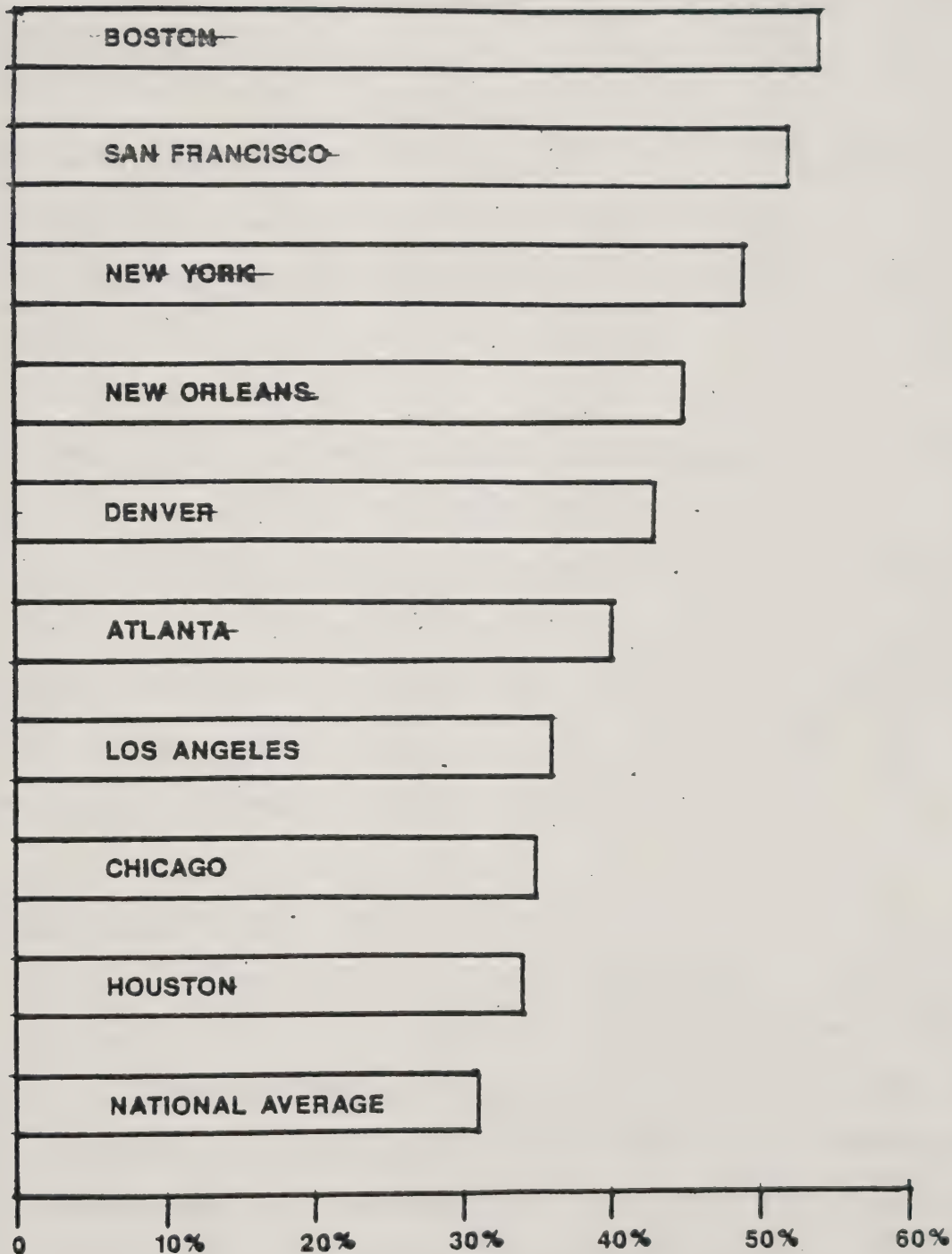
One such analysis now on-going is a survey of the Boston office market. A summary of the work now in progress describing the strength of the Boston office market generally, as well as the particularly strong estimated current and projected performance of the Back Bay market, appears below. That summary is followed by a detailed examination of current and projected office vacancy rates, both city-wide and specific to the Back Bay. Finally, a summary of that portion of the Authority's 1986 Office Industry Survey for the Back Bay is provided.

A. OFFICE MARKET SUMMARY

In the three year period, 1984-1986, Boston gained 36,000 jobs (12,000 jobs a year), in comparison with 7,500 annually in the overall 1980-1986 period.

Development construction, to accommodate this job growth, totalled \$3.5 billion in the 1984-86 period, or \$1.2 billion a year (total development cost at 1985 prices), in comparison with an annual average of \$760 million a year in the 1980-83 period.

PERCENT OF JOBS IN THE SERVICES SECTOR: _____
COMPARISON OF MAJOR CITIES



NOTE: Private Services Include: Transportation, Communication, and Public Utilities; Finance, Insurance, and Real Estate; and Business, Professional, Health and Higher Education Services.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis

Development investment reflected the fundamental broadening and upgrading of Boston's economic base. Boston's (private) office inventory had grown from 37.2 million square feet, in 1980, to 43.7 million square feet, in 1986 (by + 6.5 million square feet or 17%), but most of this addition came on stream in the 1984-85-86 years.

Boston's hotel rooms increased by two-thirds since 1980 to serve the growing number of business visitors (50% of hotel clients), convention goers (30%) and tourists (20%). Half of the increment in hotel rooms emerged in 1984, 1985 and 1986.

Boston's retail space was very substantially expanded and upgraded with the addition of 1.1 million square feet of net new space between 1980-1986 (a growth of 14 %) in total downtown retail space in response to Boston's reemergence as a metropolitan shopping center, the demand of the expanded, upscale labor force, and the growing resident population. Virtually all of these new facilities came on the market in 1984, 1985 and 1986, reflecting the return of an era of people feeling good about Boston.

Record Office Development, Declining Vacancies

Record levels of office development and space absorption, in 1984, 1985 and 1986, accompanied by declining vacancy rates, speak to the good health of Boston's office market as 1986 drew to a close. Vacancies for Class A Office space had peaked at 9% in second quarter 1985, following the extraordinary volume of office building in Boston in 1984, but diminished smartly to 7% in second quarter 1986, and 6% in the third quarter as demand for office space continued unabated while the net new supply of Class A space slackened.

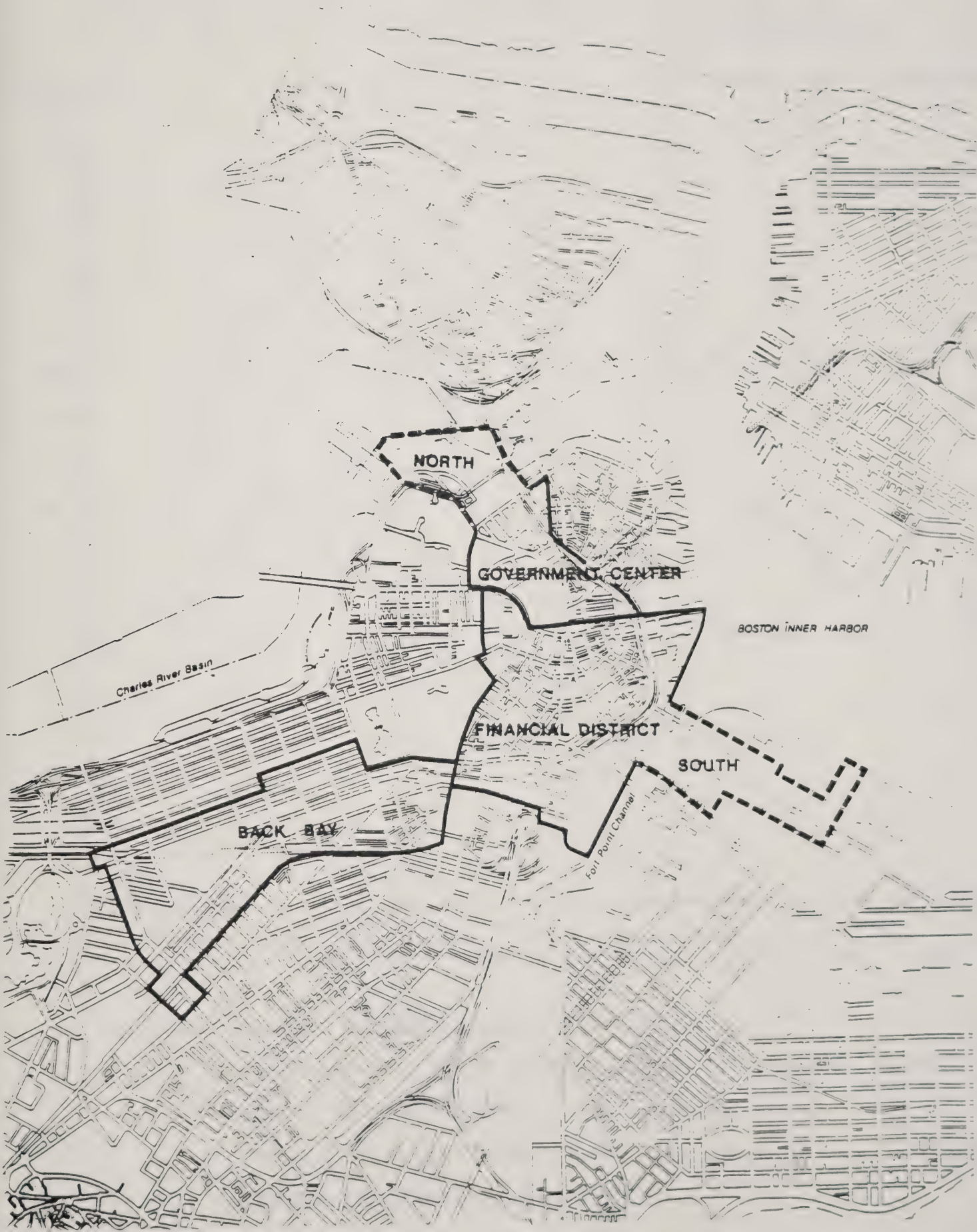
The Boston experience contrasts with that of the suburban ring (where vacancies have risen to 15% in Fall 1986), and with that of the Nation's larger cities and metro areas (where vacancy rates have increased to 14% and 18% respectively). Among 27 large cities, Boston's Fall 1986 office vacancy rate of 8% is bettered only by New York City's 6.5%.

Boston's office market will ease moderately in 1987 and 1988 as 5 million square feet of Class A office space are completed. Vacancies may rise at year-end 1987 and 1988 (even with projected moderate levels of demand and absorption at 1.8 million square feet each year) but will remain well below the Metro and National rates. Thereafter, however, with few additions to supply, vacancies will recede sharply by year-end 1989 and 1990, creating an important window of opportunity for new development projects. This perspective draws on projections of the likely range of demand suggested by office employment growth prognoses and recent trends in office space absorption.

The Class A Office Market

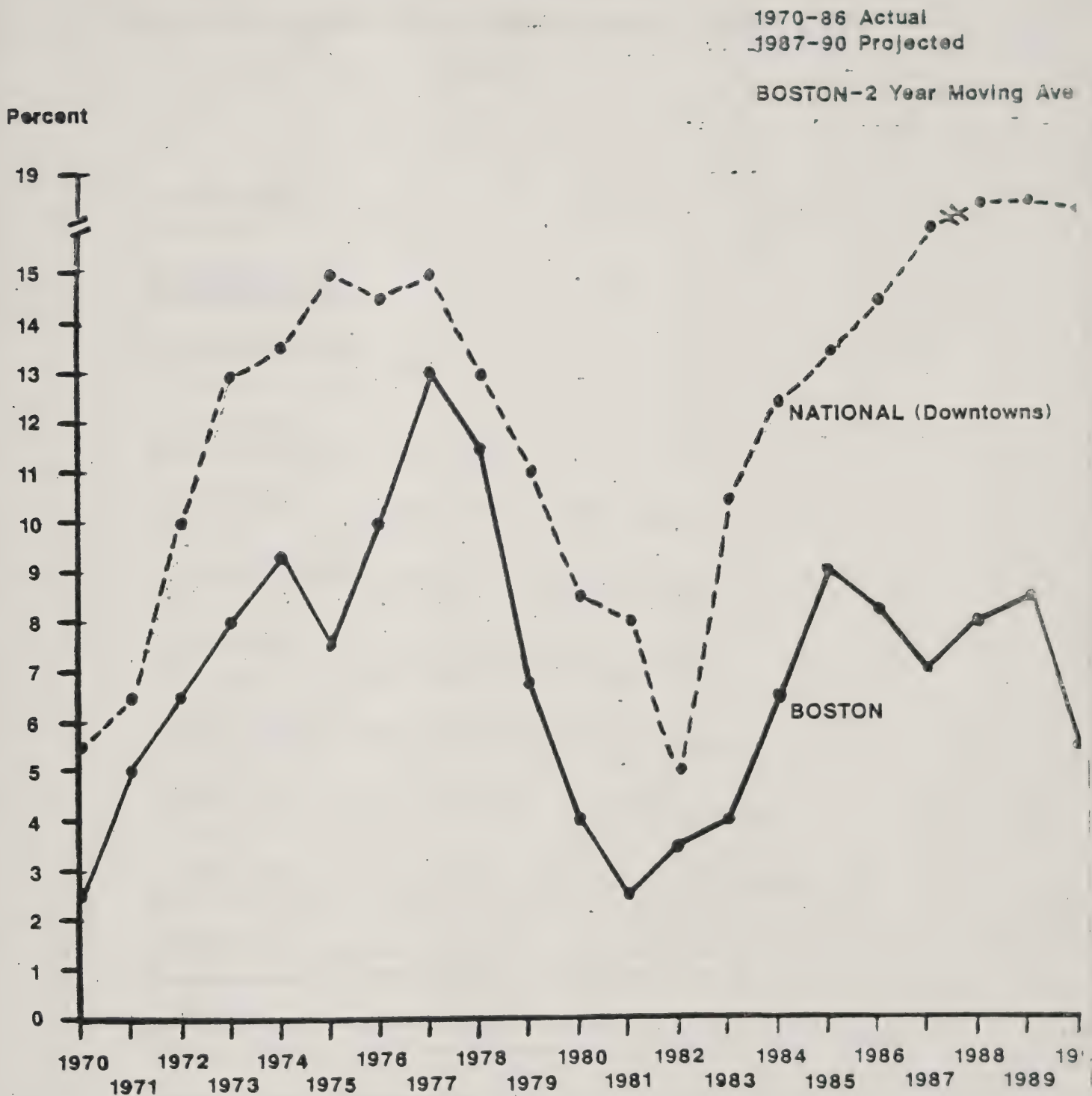
Class A space (made up of buildings constructed since 1960 or renovated to new condition, commanding rentals of \$20 a square foot or more), is expanding more rapidly than the total office inventory, drawing on both new construction and the renovation of older space (having reduced, thereby, the share of the non-Class A inventory from 60%, in 1978, to 37%, in 1986). Information on the construction schedule of approved projects through 1990 indicates that this trend will continue with the addition of 6.4 million square feet of Class A space, in the interim, and the growth of the Class A inventory to 33.8 million square feet, representing an 1986-1990 annual growth rate of 5.6%.

BOSTON'S CLASS A OFFICE MARKETS



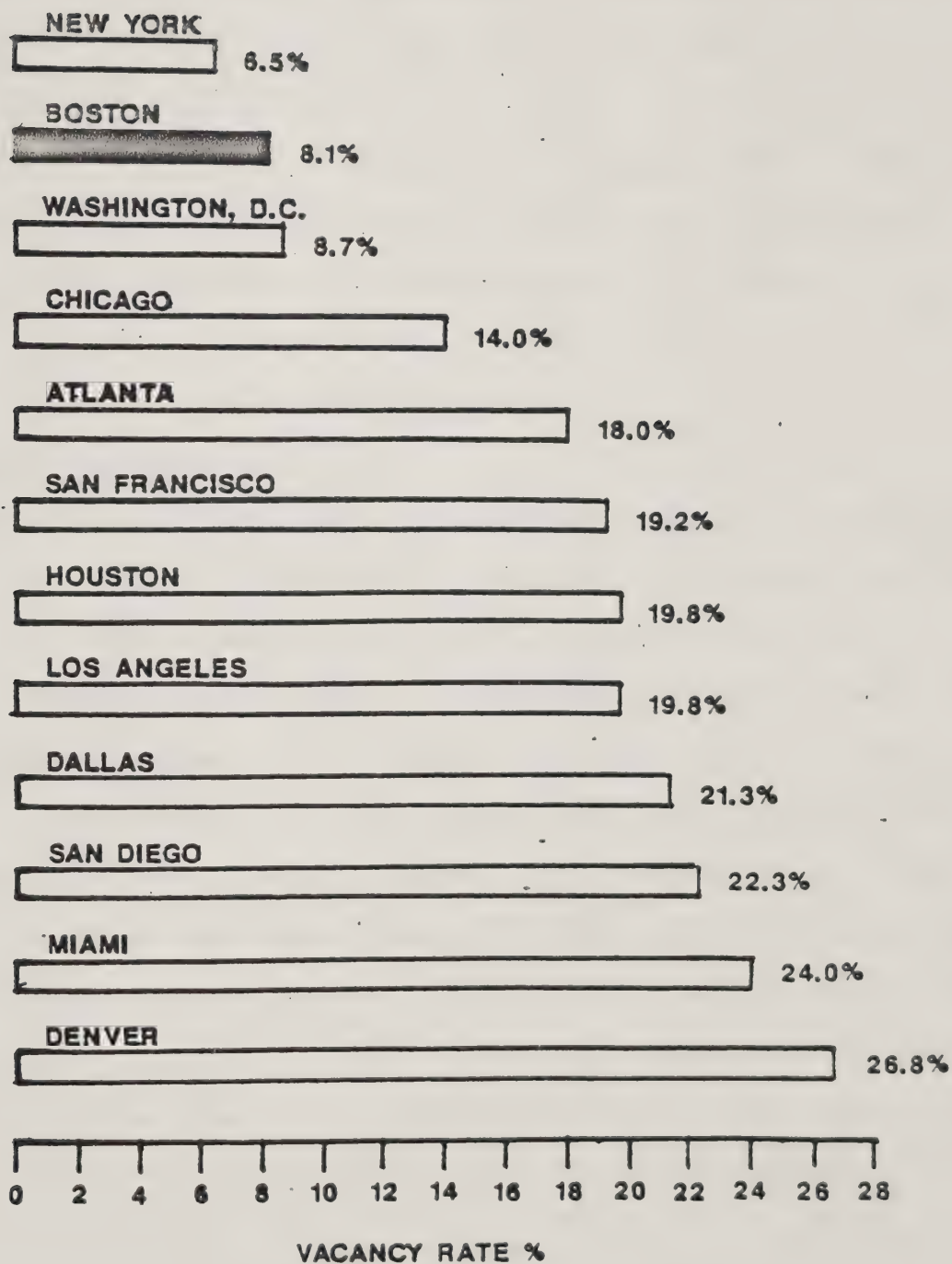
BOSTON AND NATIONAL CLASS "A" VACANCY RATES

1970 - 1990



SOURCE: Boston Redevelopment Authority,
BOSTON BUILDING OWNERS AND MANAGERS ASSOC.,
BOMA INTERNATIONAL, SPAULDING & SLYE,
THE OFFICE NETWORK (Houston), and
TORTO-WHEATON ASSOCIATES.

VACANCY RATES FOR
TWELVE MAJOR DOWNTOWN OFFICE MARKETS
1986



SOURCE; The Office Network, Houston, Oct. 1986

The Back Bay Market

The Back Bay office market is expanding more rapidly and has a lower vacancy rate than the Financial District office market. The Back Bay office economy is smaller than that of the Financial District (though larger in insurance companies), with specialization in advertising and other business and professional services. Though the Back Bay Class A office inventory supply is scheduled to grow by 1.4 million square feet, from 1986 through 1990, only 700,000 square feet of Class A space will be completed in 1987 and 1988 in the Back Bay, and vacant space may be expected to dwindle. In the second quarter of 1990, vacancies would remain the lowest in the Metro area.

Special Features of Boston's Office Economy

Quality Upgrading

The upgrading of the quality of Boston's office supply responded, in part, to a significant upscale shift in the quality of demand. Between 1976 and 1983, employment in business and professional services activities firms, mainly small and medium sized, and with a richer mix of professional, managerial and technical occupations, expanded more rapidly than in the banking and insurance firms with their phalanxes of lower skilled secretarial and clerical workers. Employment levels in firms with 500 or more workers actually fell by 7%, while jobs in firms with 50 to 500 workers increased by more than 50%. The enhancement of the quality of demand supported the rise in Boston office rental rates which are second only to those in New York and Washington, D.C. These trends in the industry shift in employment are projected to continue.

Value Appreciation

Value appreciation has emerged as a measure of the preference for Boston office buildings as a long-term investment, with some recently constructed buildings reselling at prices beyond development costs, reflecting rising rentals, low vacancies, declining interest and property tax rates, and outstanding long-term demand prospects in a market with land scarcity and a closely managed project approval process. Even though rentals have been rising, a recent survey of tenant firms showed a median and mode office rental as a percent of gross income of 8 to 10%, indicating that Boston office rents are not out of line with the norm of ability to pay. Also, the recently enacted federal tax reform may favor investment in Boston office buildings relative to those of the suburban office parks and that of other large cities and metro areas with their greater dependency on tax syndication. And with the annual increment in the City's property tax rate limited to 2½ percent, while property values have been and are expected to continue to rise at a much higher rate, property tax rates are declining and this trend will continue.

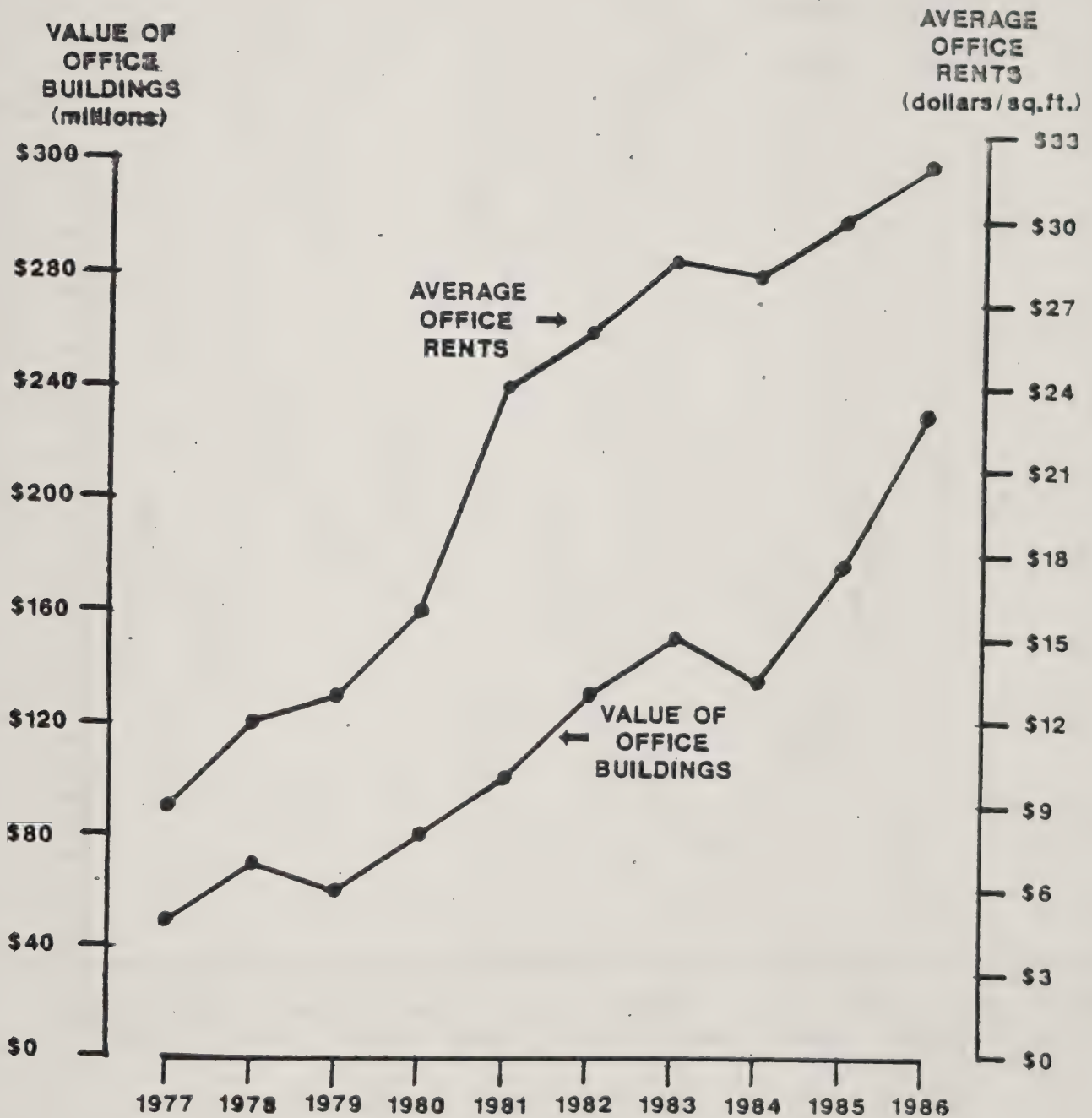
The New Investor Interest In Boston

Quality upgrading and value appreciation, as indexes of a strong long-term investment market, have spurred the broadening of international investment interest in Boston development, especially office buildings.

Since 1978 foreign direct investment has grown at a rate more than three times that of the U.S. production of goods and services,¹ with the

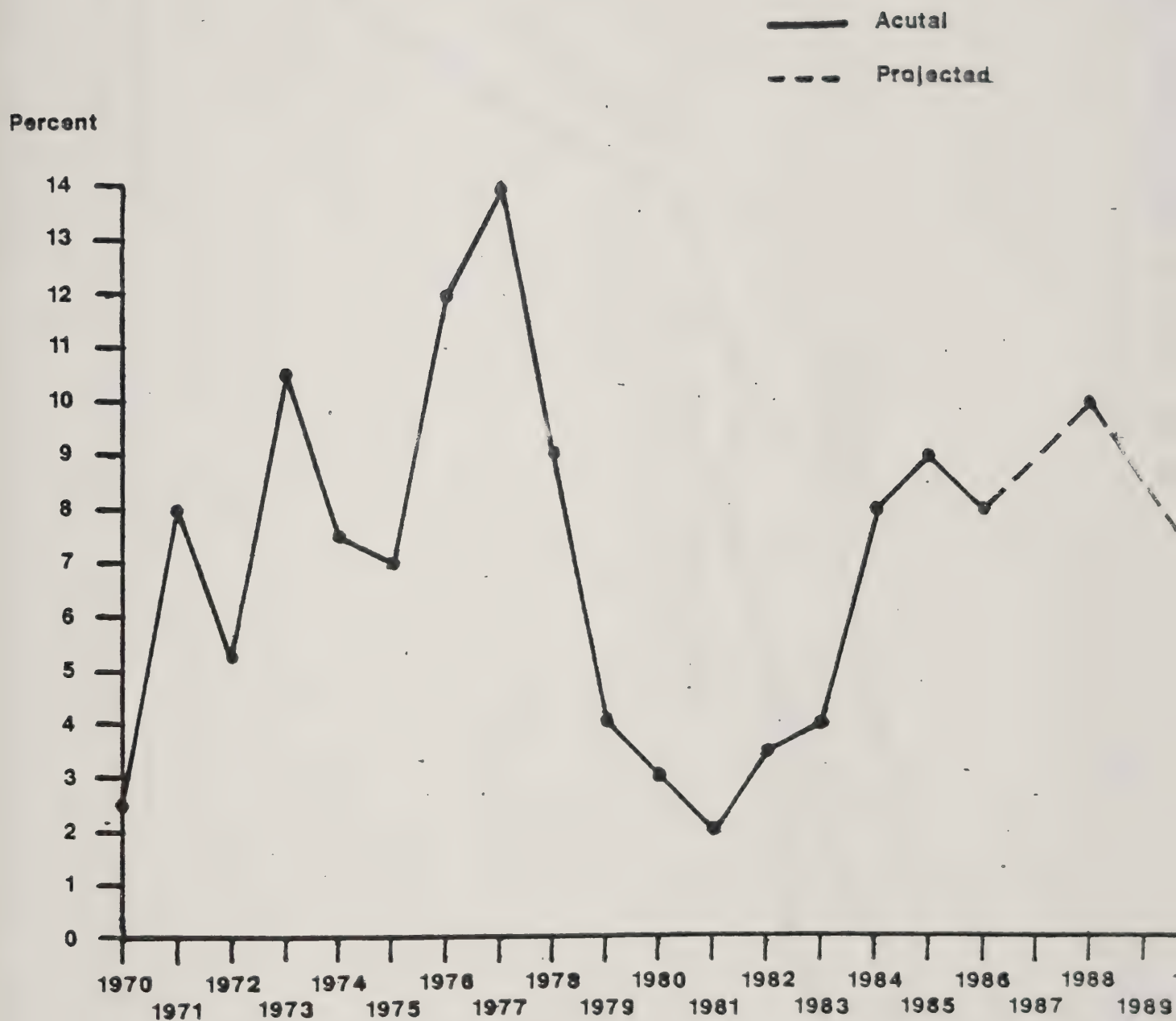
1. Jane Sneddon Little, "Foreign Direct Investment in New England," Federal Reserve Bank of Boston, New England Economic Review, Mar./Apr. 1985.

BOSTON PROPERTY VALUES AND RENTS PER SQUARE FOOT FOR CLASS "A" OFFICE BUILDINGS (1977 - 1986)



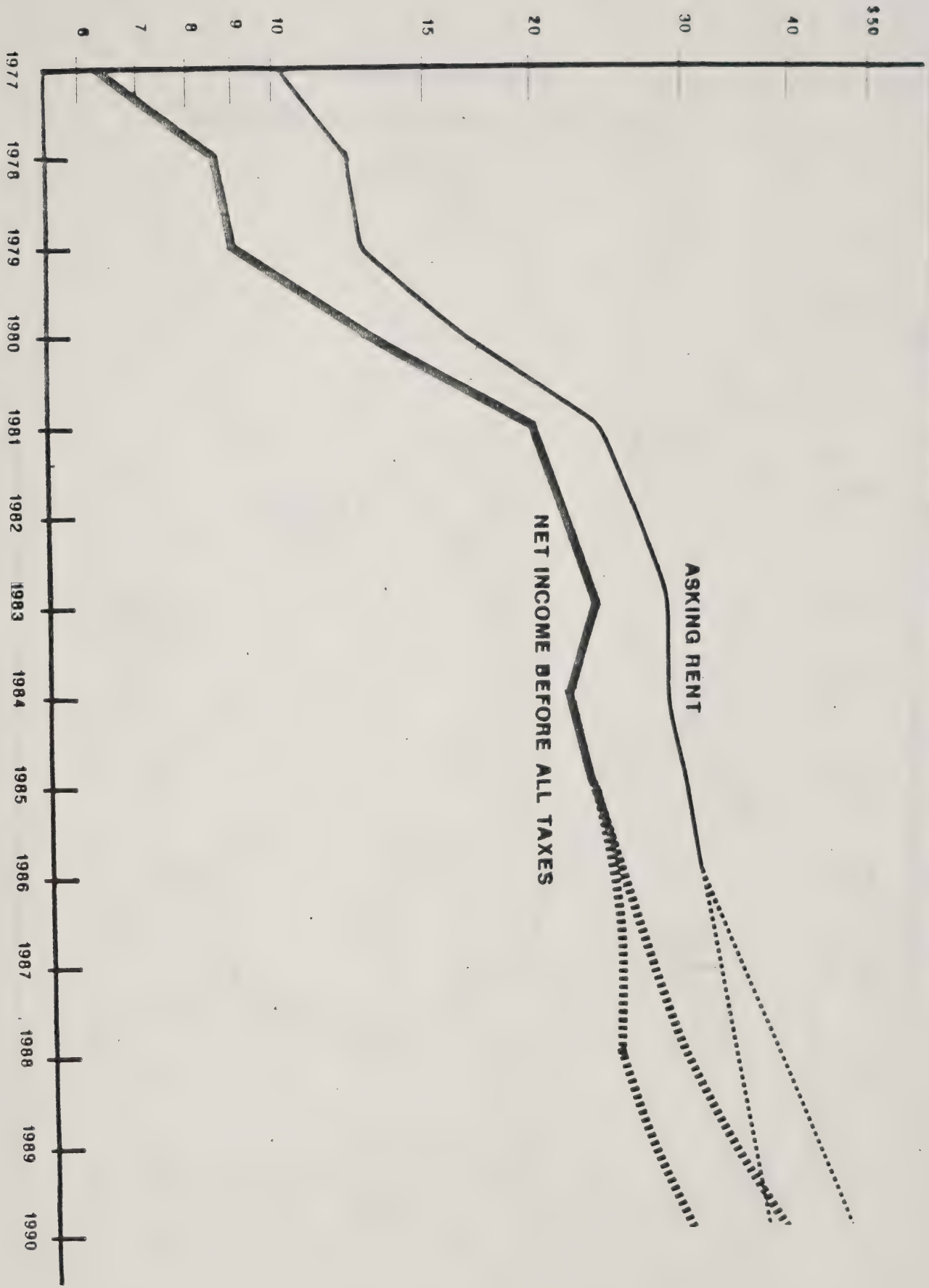
SOURCE: Boston Redevelopment Authority

BOSTON CLASS "A" OFFICE VACANCY RATES (1970 - 1990)

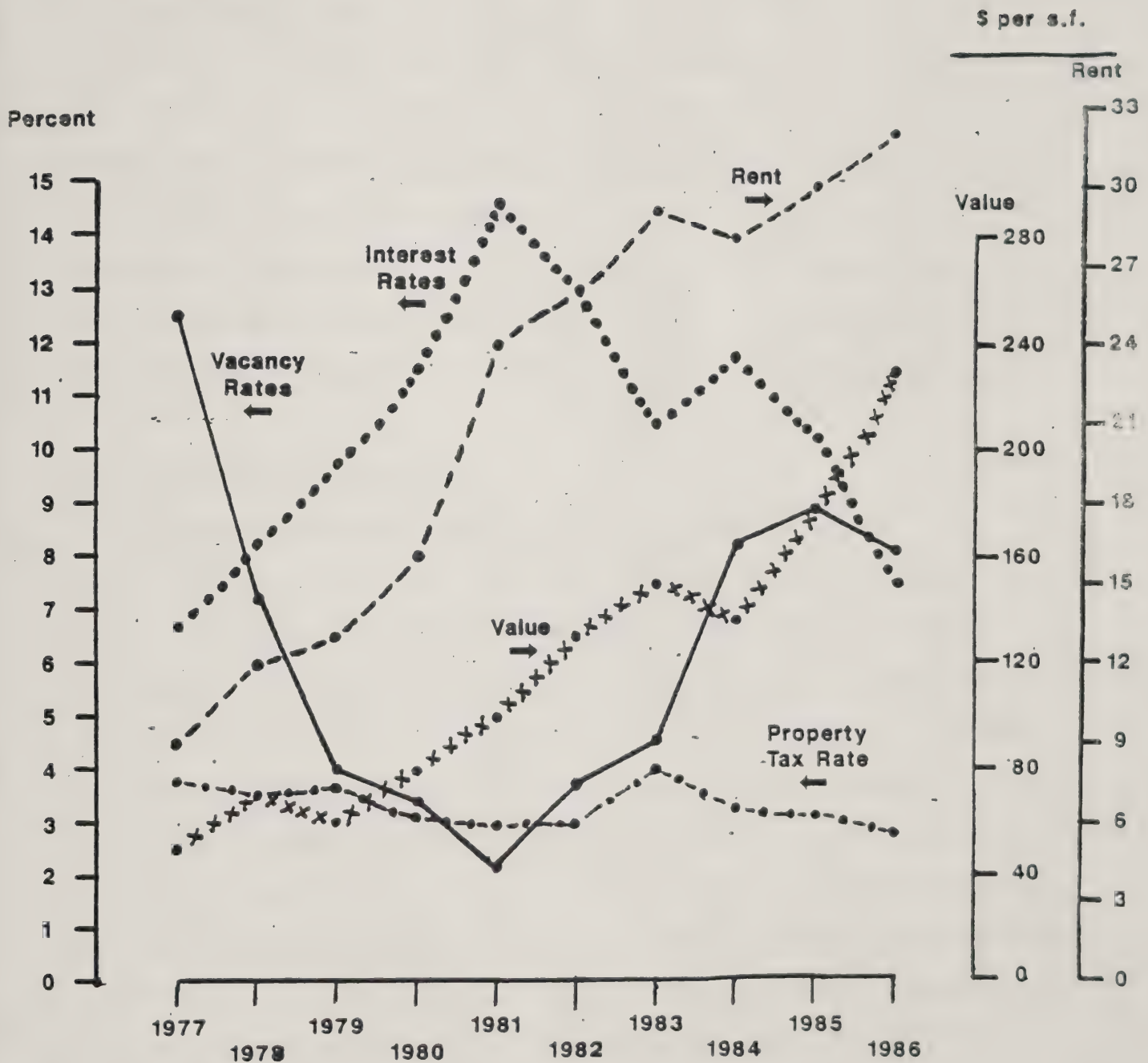


SOURCE: Boston Redevelopment Authority

RENT TRENDS Existing Class A Office Space



FACTORS ENHANCING COMMERCIAL PROPERTY VALUES IN BOSTON 1977 - 1986



SOURCE: Boston Redevelopment Authority

appeal of a more secure and stable investment climate. "New England is also one of the areas where foreign-owned business has reached greatest local importance," attracted by the region's economic renaissance.

B. MANAGING THE GROWTH ECONOMY

Managing Boston's growth economy is a cardinal element of city development policy which is deftly marshalled through a systematic project approval process. Newly adopted and proposed planning and zoning tools, including allowable heights and use by downtown sub-districts will facilitate the management of office space supply in relation to demand. Beyond 1990, the office market can be successfully managed by constraining office supply, in time and place, in relation to demand and planning and development goals.

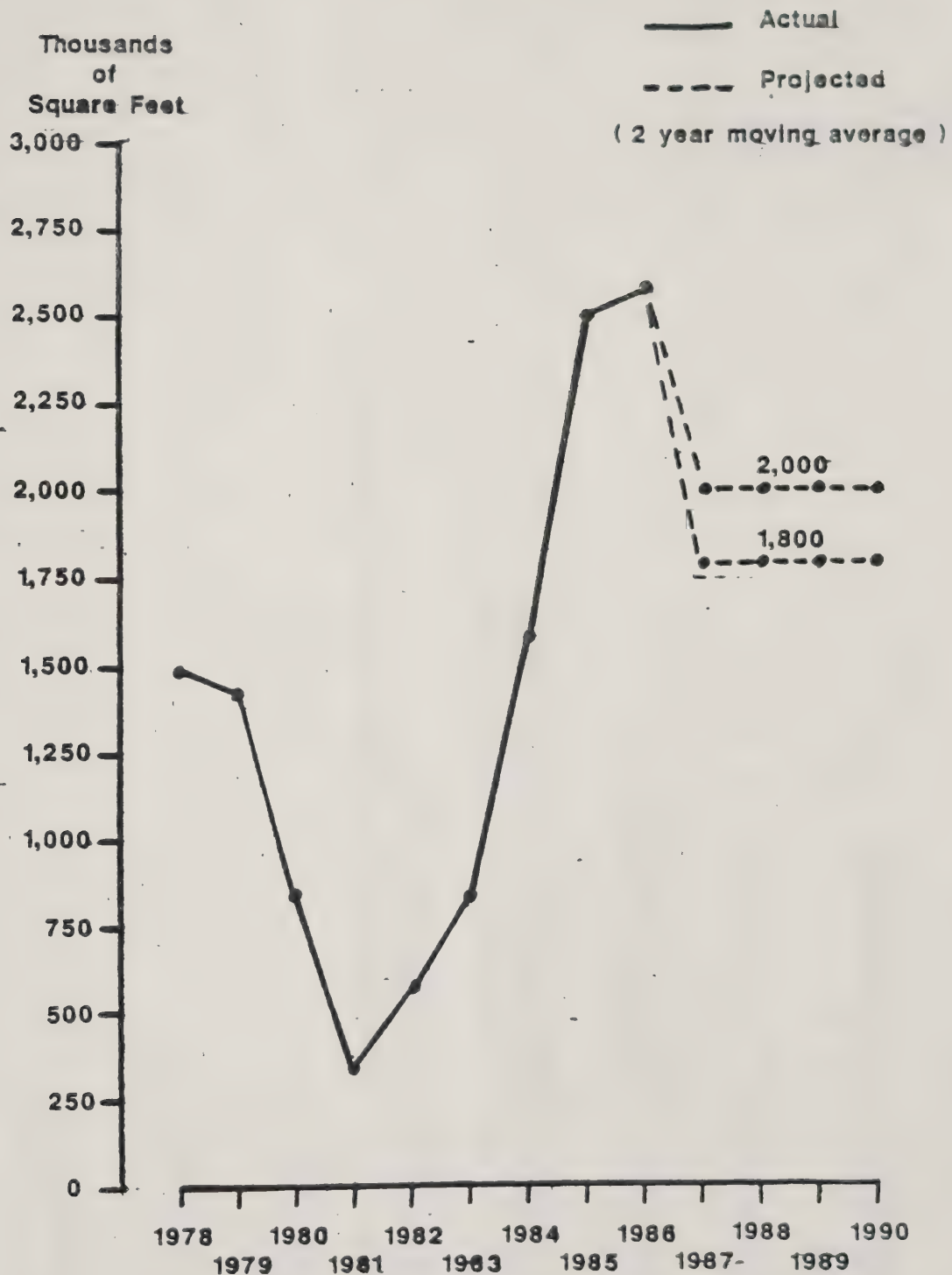
Monitoring Boston's Office Space

An Inventory of Office Space in Downtown Boston

An inventory of Boston's office space, conducted in 1986 as prelude to a survey of the office economy, and representing a sequel to a similar inventory carried out in 1978, attests to the substantial growth and upgrading of Boston's office space in the interim. Upgrading reflected both the greater ease with which older space could be readied for the market, in comparison with new construction, as well as the upscale trend in business and professional services with its higher grade space needs and related higher office rents. Over and above the net increase of 21% in the City's office space, 1978 to 1986 (the survey years), there was an extraordinary level of rehabilitation and conversion of older space.

BOSTON CLASS "A" OFFICE DEMAND

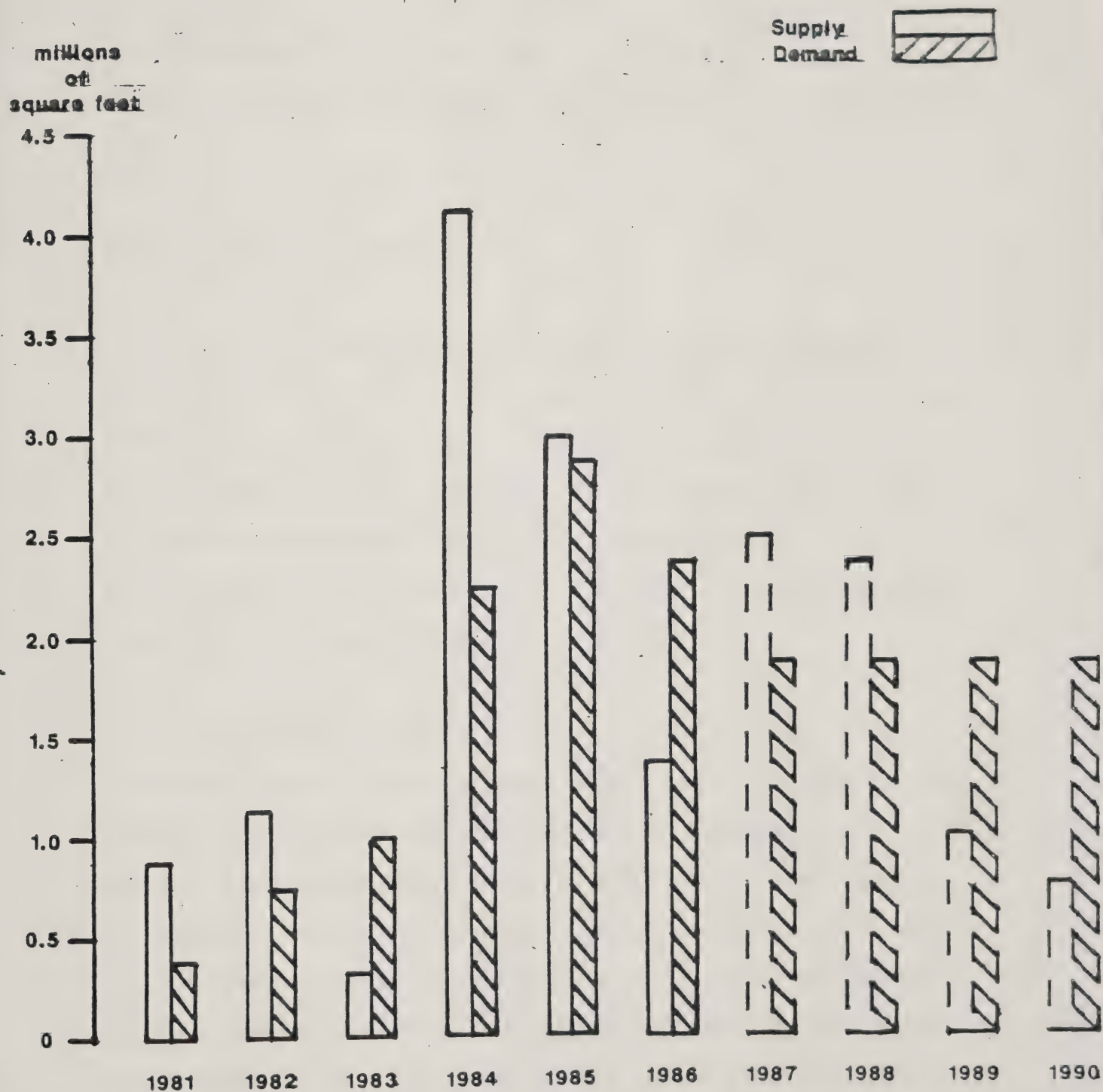
(1978 - 1990)



SOURCE: Boston Redevelopment Authority, and Spaulding & Slye

BOSTON CLASS 'A' OFFICE SUPPLY AND DEMAND

(1981 - 1990)



SOURCE: Boston Redevelopment Authority

Of Boston's 41.4 million square feet of office space, in 366 buildings, as of early 1986, 26.2 million square feet in 94 buildings were judged to be Class A.

The Financial District extended dominates with 65% of all office space, followed by 23% for Back Bay extended, and 12% for the Government Area.

The Class A Office Inventory

To monitor and analyze the office market, and as part of the office inventory and the office industry survey, a Class A "Consensus" list of buildings has been established, taking note of the practice of Boston's principal realtor firms. In this case, Class A comprises 94 buildings (26.2 million square feet of office space) constructed since 1960, renting for \$20 a square foot or more. As of early 1986, Class A office space in Boston had an average rent of \$29 a square foot.

The Office Industry Survey

The Office Industry Survey is based on an in-depth questionnaire interview of building owners and managers, to elicit information on the building stock, and of tenant firms, to probe into the characteristics of the companies and their employees, by industry and occupation, salary range and residency and commuting patterns. A stratified random sample of owners and managers includes 98 buildings, representing 7.5 million square feet of office space, equal to 19% of the total inventory; the interview stage is 85% complete. The tenant survey covers 25% to

30% of the tenant firms in the 98 buildings. The tenant firm survey interview stage is 50% complete. The results of that portion of the office industry survey pertinent to the Back Bay are described in greater detail below.

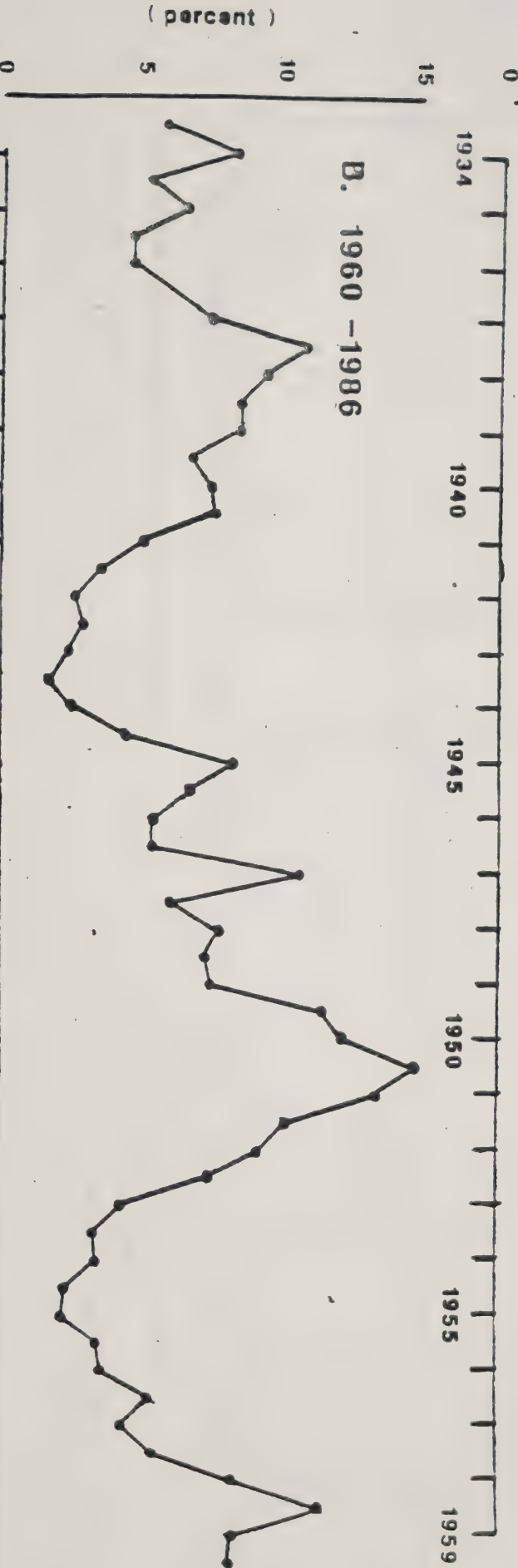
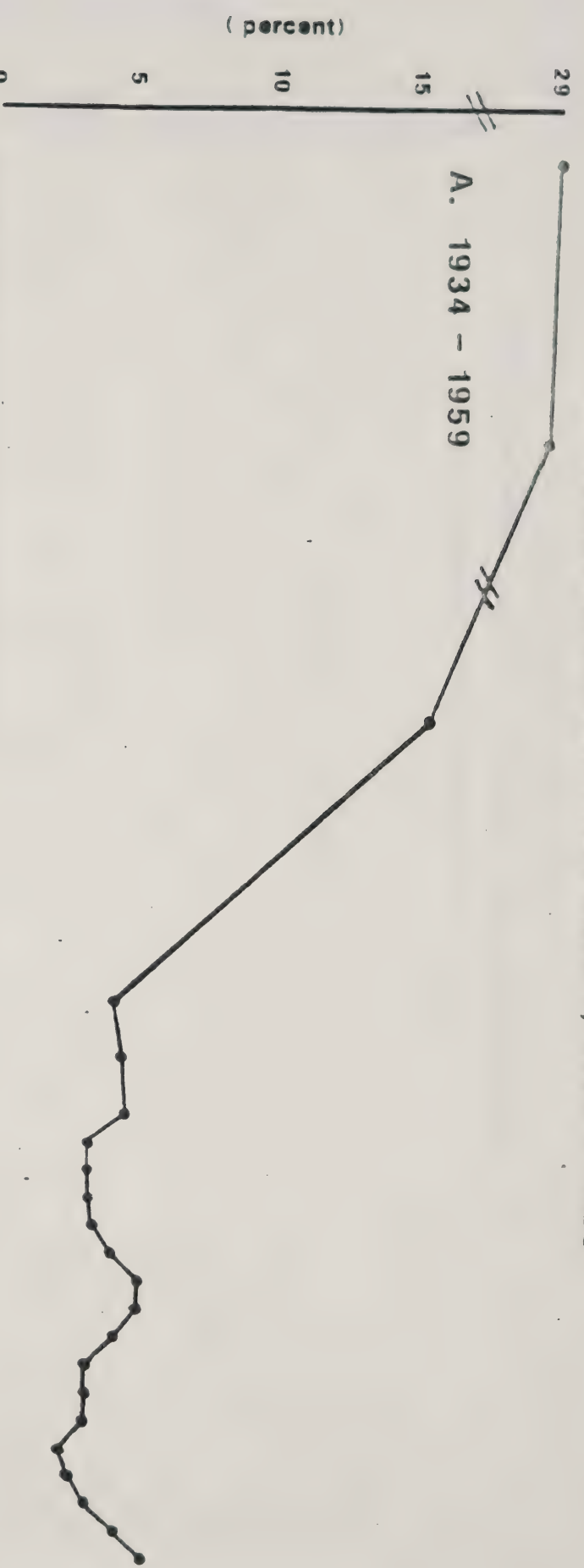
Among the findings:

- o Landlords are writing shorter term leases, currently ranging from 3 to 5 years;
- o Tenants are becoming fewer and larger, occupying available space in their buildings to expand;
- o Tenant firm industry composition in the Financial District is dominated by "banking and credit" (35%), financial services (26%), legal services (15%) professional service (6%), insurance (6%), real estate (5%), and business services (4%). Professional and managerial personnel make up 49% of the total, and clerical and other 51%.
- o Of the Financial District professional personnel, 21% were lawyers, 18% architects, 11% accountants, 10% sales managers, 9% economists, 2% computer specialists 1% artist, 1% writers/editors.
- o In the Back Bay District the range of occupations is more narrowly circumscribed and includes, among professionals, accountants (24%), economists (11%), architects and sales managers (5% each), engineers (3%), lawyers (2%), branch managers (2%), artists (2%), writers/editors (1%).
- o Most buildings in Downtown Boston are owned through limited partnerships and trust; only one building in the survey was owned through syndication

How Boston's Realtor Firms View The Boston Office Market

Boston's expanding roster of office brokerage firms issue regular survey reports which vary in coverage, format and timing. Their recent findings, nevertheless, have a common thread: Boston vacancies are declining, absorption is high and demand is strong. In contrast, the market is judged to be soft in many of the Nation's large cities and suburban areas, and in the Boston Suburban ring. Looking ahead, realtors are noting the anticipated

POSITION OFFICE VACANCY RATES, 1934 - 1986

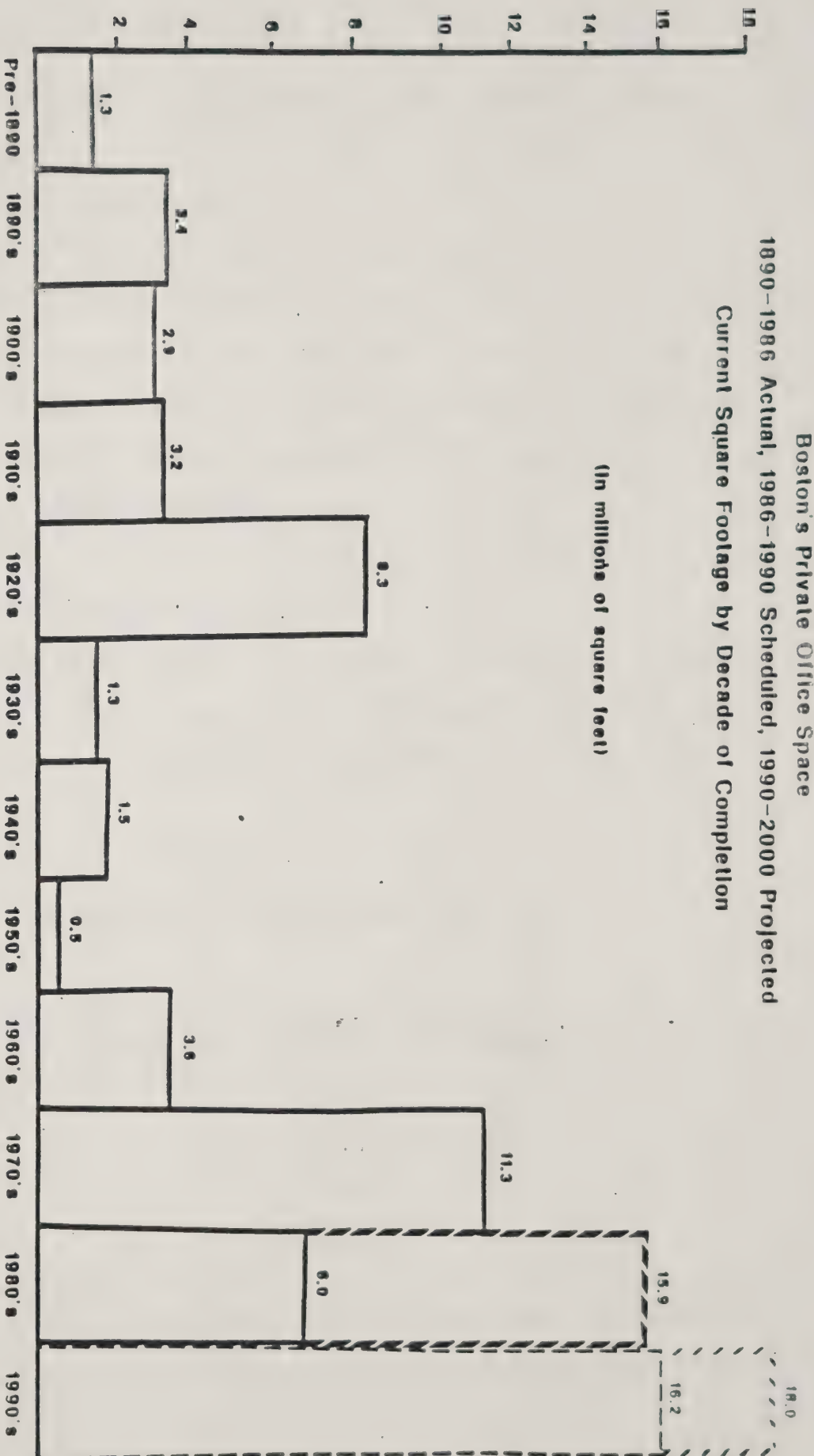


SOURCE: Greater Boston Real Estate Board, Building Owners and Managers Association (BOMA), Office Vacancy Surveys.

Boston's Private Office Space

1890-1986 Actual, 1986-1990 Scheduled, 1990-2000 Projected

Current Square Footage by Decade of Completion



Note: Includes all privately built class A, B and C office space

Total for 1986 - 43.7 million square feet

Source: BNA Research Department, 1986.

— Actual through 1986
 - - - Scheduled
 / / / / / Projected, based on employment projection
 - - - - - Projected, based on development trend 1983-86

rise in Boston vacancies as five million square feet of office space comes into the market in 1987 and 1988. Typical of recent realtor reports is the following:

The Spaulding & Slye Report, October 1986

"Downtown's vacancy rate of 8% is down from 10% a year ago as the city prepares to absorb [2.5 million square feet or Class A space] coming on line in 1987. This year's absorption of over two million square feet since the first of the year has already broken the record two million square feet leased in 1984. The Cambridge market has remained soft...The suburban vacancy rate continues its drop to the current 16%".

C. BACK BAY OFFICE INDUSTRY SURVEY

The Back Bay Survey sample includes 24 buildings or 24 percent of the total sample, representing 1,157,510 square feet of office space or 15% of the total sample. Sample buildings are distributed over all building classes. See Table 19.

Table 19. Building Class Sample in Back Bay

<u>Building Class</u>	<u>Number of Buildings</u>	<u>Square Feet</u>	
		<u>Number</u>	<u>Percent</u>
A1	1	207,832	18
A2	4	459,964	40
B1	13	288,601	25
B2	1	151,770	13
C	5	49,343	14
TOTAL	24	1,157,510	100

Currently, 69 firms occupying 616,068 square feet, have been interviewed.

Table 20 reveals the distribution of firm types and of employees within those

firms. Of particular interest is that thirty-five percent of the firms interviewed in the Back Bay are small business service firms (public relations, advertising, personnel and data processing) employing 7 percent of workers in the sample. The major employers in the Back Bay are insurance companies, employing 77 percent of the work-force and occupying fifty-three percent of the square footage in the Back Bay sample.

Calculations of square feet occupied/worker, as shown in Table 20, reveal that the insurance companies are most conservative in their use of space, allocating 104 square feet/worker. On the other hand, the firms leasing the most space/worker in the Back Bay (as in the Financial District) are government, social service and non profit organizations, occupying 950 square feet/worker. See Table 20.

Table 20. Square Feet/Worker in Back Bay Industries

<u>Industry</u>	<u>Number of Employees</u>	<u>Square Feet Occupied</u>	<u>Square Feet/ Worker</u>
Printing and Publishing	2	1,000	580
Air Transport	5	1,400	280
Communications	48	9,600	200
Wholesale/Retail	6	1,850	308
Banking and Credit	8	7,500	937
Financial Services	13	5,900	454
Insurance	3116	324,416	104
Real Estate	124	36,621	295
Business Services	287	84,623	295
Motion Pictures	146	49,180	337
Health Services	5	2,400	480
Legal Services	12	41,000	342
Educational Services	93	40,000	433
Gov/Social Service/ Non Profit	8	7,600	950
Professional Services	166	39,590	238
TOTAL	4039	616,068	

TABLE 21

Percent Professionals Employed in Principal Industries

in the Back Bay
(in Percent)

OCCUPATIONS	Industry						PERCENT OF TOTAL
	FINANCIAL SERVICES	BANKING	INSURANCE	BUSINESS SERVICES	PROFESSIONAL SERVICES	LEGAL SERVICES	
ECONOMISTS	*	*	10	0	0	0	11
ENGINEERS	0	0	0	0	3	0	3
ARCHITECTS	0	0	0	0	5	0	5
ACCOUNTANTS	0	24	0	*	*	0	24
MANAGER/SALES	0	0	4	1	0	0	5
BRANCH MANAGERS	0	0	0	2	0	0	2
COMPUTER SPECIALISTS	0	0	0	*	0	0	*
LAWYERS	*	2	0	0	0	*	2
PURCHASING AGENTS	0	0	0	0	0	0	0
ARTISTS	0	0	0	2	*	0	2
LIBRARIANS	0	0	0	0	0	0	0
HEALTH PROFESSIONALS	0	0	1	0	0	0	0
WRITERS/EDITORS	0	0	0	1	0	0	1
OTHER PROFESSIONALS	0	27	14	2	*	0	43
PERCENT OF TOTAL	*	54	28	9	8	*	100

* INDICATES LESS THAN ONE-HALF OF ONE PERCENT OF THE TOTAL

NOTE: PERCENT OF TOTAL FIGURES MAY VARY (FROM ROW & COLUMN TTLS.) DUE TO ROUNDING ERROR; ALL PERCENTAGES BASED ON A WORKFORCE SAMPLE OF 1,656 PROFESSIONALS IN THE BACK BAY.

SOURCE: BOSTON REDEVELOPMENT AUTHORITY, RESEARCH DEPARTMENT.
OCTOBER 21, 1986

Clerical Workers Employed in Principal

Industries in the Back Bay

(in Percent)

Occupation

INDUSTRY	Occupation				PERCENT OF TOTAL
	BANKTELLER, CLERK BOOKKEEPER, SUPERVISOR	SECRETARY, CLERK	RECEPTIONIST	COMPUTER OPERATOR	
CONSTRUCTION	0	0	0	0	0
FURNITURE	0	0	0	0	0
PRINTING/PUBLISHING	0	0	0	0	0
BANKING/CREDIT	0	52	0	0	52
FINANCIAL SERVICES	0	*	0	0	*
INSURANCE	0	37	0	0	37
REAL ESTATE	*	2	0	0	2
BUSINESS SERVICES	1	2	4	*	7
LEGAL SERVICES	*	*	0	0	*
EDUCATIONAL SERVICES	0	*	*	0	*
PROFESSIONAL SERVICES	*	1	*	0	1
SOCIAL SERVICES/ NON-PROFIT	0	*	0	0	*
PERCENT OF TOTAL	1	95	4	*	100

* INDICATES LESS THAN ONE-HALF OF ONE PERCENT OF THE TOTAL

NOTE: PERCENT OF TOTAL FIGURES MAY VARY (FROM ROW & COLUMN TTLS.) DUE TO ROUNDING ERROR; ALL PERCENTAGES BASED ON A WORKFORCE SAMPLE OF 1,633 CLERICAL WORKERS IN THE BACK BAY.

SOURCE: BOSTON REDEVELOPMENT AUTHORITY, RESEARCH DEPARTMENT.
OCTOBER 15, 1986

TABLE 23
Workers by Industry as a Percent of

Total Workforce in the Back Bay

INDUSTRY	Occupational Category				PERCENT OF TOTAL
	PROFESSIONAL/ MANAGERIAL	SALES	CLERICAL	LABOR/ SERVICE	
BANKING/CREDIT	21	10	21	0	52
FINANCIAL SERVICES	*	*	*	0	*
INSURANCE	11	*	15	0	26
REAL ESTATE	2	1	1	0	3
BUSINESS SERVICES	4	1	3	0	7
LEGAL SERVICES	*	0	*	1	2
EDUCATIONAL SERVICES	5	*	*	0	5
PROFESSIONAL SERVICES	3	*	1	0	4
SOCIAL SERVICES/ NON-PROFIT	*	0	*	0	*
PERCENT OF TOTAL	46	13	39	1	100

* INDICATES LESS THAN ONE-HALF OF ONE PERCENT OF THE TOTAL

NOTE: PERCENT OF TOTAL FIGURES MAY VARY (FROM ROUNDING ERROR; COLUMN TTLS.) DUE TO ROUNDING ERROR;
ALL PERCENTAGES BASED ON A WORKFORCE SAMPLE OF 4,140 WORKERS IN THE BACK BAY.

SOURCE: BOSTON REDEVELOPMENT AUTHORITY, RESEARCH DEPARTMENT.
OCTOBER 21, 1986

Table 21 lists industries employing professional workers in Back Bay. The largest single professional group employed by sample firms is accountants. Not surprisingly, the banking and insurance industries are the largest employers of clerical workers, as noted in Table 22. Insurance is a particularly "clerical intensive" industry with 56 percent of its work-force employed in clerical specialties. The insurance companies are the only major employers in Boston's office buildings whose non professional staffs outnumber their professional staffs. Table 23 demonstrates the professionalization of the work-force noted in the Financial District, as well.

Employers in the Back Bay reported difficulty in recruiting for some categories of professional staff, notably architects, (6 percent reported recruitment problems), engineers, (4 percent) and accountants (4 percent). Far more employers, (36 percent) were concerned, however, with the dearth of candidates for clerical/secretarial positions. Because of the shortages, twenty-two percent of employers reported making a special effort to hire Boston residents. Twenty-three percent felt that additional training would help to increase the pool of qualified candidates.

The survey attempted to elicit data on salary ranges for specific job categories. In general, although cooperative in providing all other information, firms were reluctant to reveal salary information. Consequently, data on this topic are somewhat scant. Table 25 gives average salary ranges for workers in each job category in Back Bay. In order to determine whether or not striking differences occurred in salary ranges between resident and non resident workers in the Back Bay, data were further broken down. A revealing presentation of these data appears in Table 26 which gives weighted averages

of salaries by major job types. Income differences between professional/managerial and sales salaries on the one hand, and clerical and service/labor salaries are particularly striking.

Salary data was used to attempt to determine whether or not low-income employees were leaving Boston due to rising rents. Employees were asked if any categories of employees had moved out of Boston over the past five years. Of those firms responding to the question, 93 percent indicated that none of their workers had moved.

Table 25. Annual Salary Ranges of Resident and Non Resident Office Workers in Back Bay
(in thousand of dollars)

<u>Job Category</u>	<u>AVERAGE SALARY RANGE</u>		
	<u>Residents</u>	<u>Non-Residents</u>	<u>All Office Workers</u>
Professional/Managerial			
90 Economists	24-61	*	26-132
3 Engineer	*	40-78	33-72
129 Architect	*	20-32	20-49
128 Accountant	*	28-30	25-48
169 Managers, Sales	25-84	36-49	33-68
169B Branch Manager	34-58	37-46	33-60
86 Computer Specialists	*	33-33	24-32
149 Lawyer	25-69	28-110	26-83
155 Purchasing Agent	*	15-15	15-15
112 Artist	19-31	22-30	22-44
152 Librarian	8-8	*	8-8
38 Health Professional	*	*	*
125 Writer Editor	15-86	25-37	21-52
168 Other Professional	18-36	27-54	8-23
Sales			
196 Financial Services	*	*	30-110
195 Insurance	27-31	*	27-31
191 Real Estate	*	*	*
198 Technical	18-65	*	18-65
203 Other Sales	19-37	26-52	22-71

* No Information

<u>Job Category</u>	<u>AVERAGE SALARY RANGE</u>		
	<u>Residents</u>	<u>Non-Residents</u>	<u>All Office Workers</u>
Clerical			
207 Bank Teller	*	*	*
211 Accounting Clerk	*	12-21	16-24
212 Bookkeeping, Hand	14-15	17-26	15-22
221 Clerical Supervisor	19-19	*	15-22
236 General clerk	*	12-23	12-20
257 Computer Operative	*	15-21	15-20
281 Secretary	18-20	15-21	15-20
296 Tel Operator	13-22	14-19	14-19
308 Other Clerical	10-14	16-33	22-22
Service and Labor			
648 Custodian	9-9	*	9-9
649 Food Service Workers	*	*	*
695 Security Guards	*	*	*
723 Other Service Workers	15-16	16-50	16-35

* No Information

Table 26. Weighted Average Annual Salaries of Workers
in Back Bay by Job Classification

<u>Job Classification</u>	<u>Salary (Dollars)</u>
Professional/Managerial	33,000
Sales	33,000
Clerical	18,000
Services/Labor	14,000

As in the Financial District, the MBTA is the most generally used mode of transportation to work among the city's employees, 37 percent, with automobile being second, 31 percent, and other modes of transportation, walking, biking, commuter boat 17 percent, third. See Table 27.

Table 27.

How Back Bay Employees Travel to Work

<u>Mode of Transportation</u>	<u>Percent Using Mode</u>
Automobile	31
Bus, train	9
MBTA	37
Park and ride	3
Auto and MBTA	2
Car pool	1
Other mode	17
TOTAL	100

Companies in the Back Bay exert little effort to provide relief for commuter congestion destined to worsen as new office buildings such as International Place and Rowes Wharf come on line. Even those transportation programs requiring no financial commitment by employers are not being taken advantage of. In fact, 68 percent of firms interviewed report offering no transportation programs at all. See Table 28.

Table 28.

Firms Participating in Transportation Programs
(in percent)

<u>Transportation Program</u>	<u>Number of Firms</u>		
	<u>Participating</u>	<u>Non-Participating</u>	<u>Total</u>
Staggered work hours	28	72	100
Four day work week	1	99	100
T Pass	10	90	100
Bulletin boards	1	99	100
Minibus	0	100	100
Other	1	99	100
None	68	32	100

One focus of the survey was to look at current trends in leasing arrangements. The survey attempted to delineate some of the characteristics of leases which are currently being written in an effort to determine whether or not the current vacancy rates are causing developers to make concessions to tenants.

Eighty-two percent of the firms interviewed have leases. Although the duration of the leases ranges from 1-10 years, most current leases are written for 3 (30 percent) or 5 (45 percent) years. See Table 29.

Table 29. Lease Lengths in Back Bay

<u>Lease Terms (years)</u>	<u>Percent of Firms</u>
0	19
1	0
2	3
3	25
4	6
5	37
6	0
7	3
8	1
9	0
10	6
TOTAL	100

Nine percent of firms in Back Bay lease more space than their current needs mandate and sublease surplus space to other firms on a short term basis.

The quantity of space subleased ranges from 10 to 40 percent of total space leased, reflecting the wish to share the cost of desirable space as well as optimistic projections of growth.

Base rents in Back Bay fall mainly within a range of \$15 to \$30/square foot. Given that some Back Bay rents appear to fall significantly below market rates, these rents may reflect a large number of old leases. See Table 30.

Table 30. Square Foot Rent Ranges of Office Tenants
in Back Bay

<u>Rent Ranges</u> <u>(dollars)</u>	<u>Percent</u> <u>of Firms</u>
0- 4.99	3
5.00- 9.99	14
10.00-14.99	12
15.00-19.99	29
20.00-24.99	27
25.00-29.99	15
N.A.:	
30-34.99	0
35-39.99	
TOTAL	100

Due to the change from the BOMA to the New York standard for measuring square footage, tenants pay for more square footage than they have in the past. Areas, such as halls, elevators, toilets and storage areas, are included in their rentable space. See Table 31.

Table 31. Common Areas Included in Firms' Rent
(in percent)

<u>Area</u>	<u>Percent</u> <u>of Leases</u>
Halls	100
Elevators	99
Toilets	100
Storage areas	88

In addition almost uniformly, current leasing arrangements require tenants to pay operating costs and taxes beyond a base year or a stop. Often rent is net of electricity, heat, cooling and/or cleaning. Seventy-four percent of firms sampled in Back Bay pay their own electricity. See Table 32.

Table 32.

Operating Costs Included in
Rents in Back Bay
(in percent)

<u>Operating Cost Category</u>	<u>Included in Rent</u>	<u>Additional Cost to Tenant</u>	<u>Total</u>
Heat	72	28	100
Cooling	57	43	100
Electricity	26	74	100
Cleaning	47	53	100
Maintenance	53	47	100
Renovations	37	63	100
Repairs	49	51	100
Taxes	74	26	100
Insurance	69	31	100
Telecommunications	3	97	100
Computer access, time sharing	0	100	100

As a consequence of tenant's paying a pro rata share of costs per square foot for common areas as well as their own heat and cooling, cleaning, and operating expense and tax escalators, effective rents are considerably higher than the base rent ranges cited in Table 30.

Thirty-five percent of firms interviewed indicated that substantial concessions were made when they signed their leases. Twelve percent received an average of three months free rent. Thirteen percent were granted substantial renovations beyond standard, and seventeen percent have an option to renew their leases.

The average firm in Back Bay has occupied the same space for 9 years and has 24 employees. Fifty-three percent of firms surveyed listed a prior address which their firms had occupied for an average of 6 years. At that time, employees numbered fifteen.

When asked why tenants had left their prior location, 59 percent reported that they needed more space. Twenty percent cited prestige as the major factor in their relocation decision. Another fifteen percent indicated that they were forced out. See Table 33.

Table 33. Reasons Given by Back Bay Firms
for Having Left Their Prior Location

<u>Reason</u>	<u>Percent of Firms</u>
Need for more space	59
Prestige	20
Forced out	15
Branch expansion	2
Poor business location	2
Merger	2
TOTAL	100

One focus of the survey is locational decisions - the factors which cause a firm to select one location over another. In general, each firm selected several factors which were key in its decision to change location. Sixty-six percent of firms in Back Bay chose their current location in order to be near clients and customers. For nineteen percent, proximity to their labor force was a priority. In terms of building and neighborhood characteristics, 50 percent asserted that their current location fulfilled their space requirements. Forty-four percent indicated that the aesthetics of the building and/or neighborhood weighed heavily in their decision. In terms of transportation factors, firms were overwhelmingly swayed by proximity to the "T" (72 percent). See Table 34.

Table 34.

Critical Factors Influencing Locational
Decisions of Firms in Back Bay

<u>Factors</u>	<u>Percent Firms Influenced</u>
Proximity to clients/customers	66
Proximity to labor force	6
Fulfills space requirements	50
Aesthetics of building/neighborhood	44
Near MBTA stop	72
Near bus or train station	35
Accessibility to Rte. 128, 93 or Mass Pike	41
Near parking facility	24
Ease of access by auto	10

Twenty-four percent of firms interviewed reported plans to move within the next two to five years, principally to other Boston locations. Of those firms, Forty-two percent (10 percent of the Back Bay sample) reported that they would consider leaving downtown Boston. Firms were asked how much space would be required for their operations if they were to move. Most Back Bay firms stated that they would need a total of less than 3000 square feet of office space for operations. See Table 35.

Table 35. Back Bay Firms' Perceptions of How Much Space
is Required for Their Operations

<u>Square Feet</u>	<u>Percent of Firms</u>
0- 1000	28
1001- 2000	22
2001- 3000	20
3001- 4000	3
4001- 5000	6
5001- 6000	6
6001- 7000	0
7001- 8000	3
8001- 9000	0
9001-10000	6
10001-11000	0
11001-12000	3
12001-13000	3
TOTAL	100

When asked to name the lowest acceptable floor that companies in Back Bay would be willing to occupy, those interviewed expressed a strong preference for lower floors. See Table 36.

Table 36. Height Preferences of Firms in Back Bay

<u>Lowest Acceptable Floor</u>	<u>Percent of Firms</u>
Basement	46
First floor	6
Second floor	34
Third floor	1
Twentieth floor	1
Don't know	10
No answer	1
TOTAL	99*

* error due to rounding

Data on ideal square footage and floor preferences underscore the differences between tenant firms in the Financial District and Back Bay. Whereas Financial District firms tend to be large and to enjoy the the prestige of new towers and large, rehabilitated buildings, Back Bay non- insurance-related firms are small, have modest space requirements and prefer to occupy lower stories.

Firms were asked how important a particular building's amenities would be in causing locational decisions to be made. Fifty-six percent stated that parking would be a major inducement. Forty-nine percent mentioned security as a major factor. See Table 37.

Table 37. Amenities Influencing Firms' Locational Decisions
(in percent)

<u>Amenities</u>	<u>Number of Firms</u>		<u>Total</u>
	<u>Positively Influenced</u>	<u>Not Influenced</u>	
Health club	4	96	100
Atrium	1	99	100
View	6	94	100
Eatery	18	82	100
Private club	0	100	100
Parking garage	56	44	100
Daycare	7	93	100
Security	49	51	100
Newsstand	0	0	100

Most firms (57%) projected a need for more advanced telecommunications and computer capability over the next 3-5 years. To complement that need, eighteen percent foresaw a need for additional space/worker. Fifteen percent described a need for additional interoffice wiring. See Table 38.

Table 38. Need for Computer Related
Improvements and Amenities Expressed
by Firms in Back Bay
(in percent)

<u>Improvement</u>	<u>Number of Firms</u>		<u>Total</u>
	<u>Needing Improvements</u>	<u>Not Needing Improvements</u>	
More space/worker	18	82	100
Single channel voice and data transmission	1	99	100
More lighting	10	90	100
More cooling	10	90	100
More inter-office wiring	15	85	100
More ducts	7	93	100
More cable storage	7	93	100

Despite firms' expressing needs for enhanced computer capability and accompanying amenities, only 7 percent of firms interviewed voiced a willingness to spend as much as \$6 to \$8/square foot for space in which telecommunications and computer systems are already in place.

A final avenue of exploration was to determine whether or not firms perceived particular Boston neighborhoods to be suitable locations for their operations.

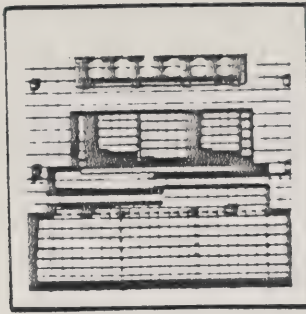
Table 39.

Table 39. Back Bay Firms' Perceptions of Boston Neighborhoods as Appropriate Locations for Their Operations (in percent)

<u>Neighborhood</u>	<u>Perceiving Neighborhood As</u>		<u>Total</u>
	<u>Suitable</u>	<u>Unsuitable</u>	
Midtown	88	12	100
Broad Street	32	68	100
Government District	9	91	100
Boston Waterfront	35	65	100
Fort Point Channel	22	78	100
South Station	26	74	100
North Station	18	82	100
Charlestown	6	94	100
East Boston	3	97	100
Southwest Corridor	3	97	100
Fenway/Kenmore	28	72	100

Collection and analysis of data from the Office Tenant Survey are ongoing, and will be reported on at a later time.

UNDERSTANDING PROFORMAS



V. UNDERSTANDING PRO FORMAS

In considering the recommended density and mix of uses of development at the Prudential Center, the PruPAC will need to understand the important financial implications of these decisions. In determining the extent to which the development can be expected to support such infrastructure costs as parking and loading, new means of vehicular access to and egress from the site, as well as provision of public amenities; the PruPAC will need to understand the project's economics.

To gauge the project's ability to provide for the aforementioned infrastructure and public benefit costs, a financial review must be accomplished. Such a review should facilitate an understanding of the structure of the transaction, the costs of designing and building the project, the operation and financing costs of the development, as well as the developer's anticipated return on investment.

In addition to impacting a sense of whether the developer's assumptions are accurate, i.e., assessing how these assumptions compare with comparable projects' development costs, revenues and market trends; a detailed financial analysis will permit the PruPAC to estimate the amount of public benefits which the project can afford.

The principal method of conducting financial review is to examine a developer's pro formas. A pro forma is an income and expense forecast which lays out a reasonable set of predictions regarding the costs of a project. There are typically two types of pro formas - a development pro forma which spells out the capital costs of building a project and an operating pro forma which predicts year-to-year expenses of running a project. These pro formas do not give actual figures, but rather they offer the most likely outcomes based on a reasonable set of assumptions. These assumptions may be varied to reflect more optimistic or pessimistic assumptions regarding the market, inflation, the time value of money, or changes in the tax laws, etc.

The development pro forma is broken down into three major categories:

1. **ACQUISITION COSTS** - the costs of assembling and clearing the required site(s). It is also called the land costs.
2. **HARD COSTS** - the costs of construction, including all physical improvements to the site.
3. **SOFT COSTS** - professional fees, financial costs, and developer's fee.

The operating pro forma is usually based on the first stabilized year of operation and usually includes the following:

Income - gross income from rental of office, retail, residential, or parking. (Based on comparable rents in a similar market.) A certain percentage is deducted for vacancy resulting in an effective gross income.

Expenses - this includes operating and maintenance expenses as well as real estate taxes. Other expenses may include lease payments or linkage charges.

Net Operating Income - this is simply the income minus expenses or the amount of money available to finance the debt.

Debt Service - the annual payment of interest and principal on the loan.

The operating pro forma can show either before-tax or after-tax calculations but in either case it should include information regarding the financing of the project, specifically the amount of equity, the amount of debt and the terms of the permanent loan.

A hypothetical development project is presented on the following pages.

MODEL DEVELOPMENT PROJECT

Development Program

Total Land Square Footage	15,000	
GROSS SQUARE FEET		
Office	120,000	
Retail	12,000	
Parking	20,000	
(# of spaces)	55	based on an average of 350 sf/space
TOTAL GSF	152,000	
NET SQUARE FEET		
Office	104,400	based on 87% efficiency
Retail	9,960	based on 83% efficiency
Parking	20,000	
TOTAL NSF	134,360	

DEVELOPMENT PRO FORMA

ACQUISITION COSTS	
Land Cost	\$ 2,250,000
\$/LSF	150
\$/FAR SF	17
HARD COSTS	
Site Improvements	525,000
\$/LSF	35
New Construction	11,220,000
\$/GSF	85
Parking	1,100,000
\$/space	20,000
Tenant Improvements	1,123,700
Office \$/nsf	10
Retail \$/nsf	8
TOTAL HARD COSTS	\$13,968,700

Development Pro Forma (continued)

SOFT COSTS

Architect/Engineering % of Hard Costs	698,400 5%	Architecture/Engineering fees usually range from 4-7% of hard costs
Legal, Accounting, Insurance	500,000	
Marketing/Brokerage	500,000	
Developer's Fee	450,000	roughly 2-4% of TDC
Construction Loan Interest	1,260,000	This figure is calculated by multiplying the amount of the loan by the interest rate by the amount of time the loan will be out by the percentage drawdown (i.e. what percent of loan is outstanding at any point in time).
Financing Fees	400,000	
Real Estate Taxes	500,000	
Permits, Title	200,000	
Operating Loss	<u>800,000</u>	The Operating Loss is a line item which accounts for a "start-up" period - i.e., the time between project comple- tion and full lease-up of a building. In this case, it is estimated that it will take 18 months to achieve 90% occupancy.
TOTAL SOFTS COSTS	\$ 5,308,400	
CONTINGENCY % of Hard Costs	\$ 977,800 7%	Contingency allowance usually ranges from 5-10% of hard costs, depending on soil conditions and foundation construction. Rehabilitation projects usually have a greater allowance based on age and condition of building.
TOTAL DEVELOPMENT COSTS	<u>\$22,504,900</u>	
Soft Costs as % Hard Costs	38%	Projected soft costs for professional fees and other expenses are comparable to other downtown projects recently reviewed by the BRA.
Soft Costs as % TDC	24%	

Operating Pro Forma (FIRST STABILIZED YEAR)

INCOME

Office		\$ 3,445,200	Rents are calculated on basis of net square footage. These rents are comparable with rents of mid-size buildings currently under construction in downtown Boston.
\$/nsf	\$33.00		
Retail		448,200	
\$/nsf	45.00		
Parking		165,000	
\$/space	250/month		

TOTAL Gross Income	4,058,400	
Vacancy	(186,420)	5% of office and retail space and 5% of parking

Effective Gross Income	3,871,980	
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OPERATING EXPENSES

Office		(469,800)	
\$/nsf	4.50		
Retail		(44,820)	
\$/nsf	4.50		
Parking		(26,400)	Parking expenses are usually estimated to be 16% of total gross parking revenues.
Real Estate Taxes		(564,600)	

Linkage	(22,857)	Linkage payments are calculated based on the formula of \$5/gsf over 100,000 gsf paid over 7 years (for housing) and \$1/gsf paid over 2 years (for job training). Since this operating pro forma represents the first stabilized year of operation, only the housing linkage payment is shown. The job training payments would be completed in year 2.
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TOTAL EXPENSES	(\$1,128,477)	
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NET OPERATING INCOME	2,743,503	
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RETURN ON TOTAL COST DEVELOPMENT COST (ROTDC) (NOI/TDC)	12.19%	ROTDC is a measure of project financial performance expressed as the ratio of Net Operating Income to Total Development Cost.
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Operating Pro Forma (FIRST STABILIZED YEAR) (continued)

DEBT SERVICE	(2,421,700)	
Term/Interest Rate/Amount		\$20,254,910 @ 11.5% for 30 years
Before Tax Cash Flow (BTCF)	321,803	
Cash-on Cash Return (BTCF/Equity)	14.30%	Cash-on-cash return indicates the ratio of cash remaining after the payment of operating expenses and debt service to invested equity on a pre-tax basis.
Equity		\$ 2,250,490 15% of TDC
Debt		\$20,254,410 85% of TDC

GLOSSARY OF REAL ESTATE DEVELOPMENT TERMS

After-tax Cash Flow (ATCF) - A measure of income from operations. Specifically, it is defined as net operating income less debt service less income taxes for any year of operation.

Amortization - The process by which the debt is reduced by a series of regular, periodic payments.

Before-tax Cash Flow (BTCF) - A measure of annual income from operation equal to net operating income less debt service.

Capitalization Rate - The rate of return that expresses the relationship between one year's income and its corresponding capital value. This is often derived from the marketplace by determining the relationship between the net operating income and the sales prices of other comparable, recently sold properties.

Cash-on-Cash Return - A measure of a project's financial performance which indicates a developer's return on invested equity. The first stabilized year's net operating income, less the annual cost of financing, divided by initial cash investment.

Construction Loan - An interim loan used to finance the construction of buildings and other improvements on a site. Typically, only interest is paid or accrued during the construction period. The construction loan is usually paid off with the proceeds of a permanent mortgage.

Debt Coverage Ratio - The ratio of net operating income to debt service. Traditionally, it is used as a measure of financial risk by lenders. Typical values of well-run investments vary between 1.2 and 1.5.

Debt Service - The periodic payment of interest only (in "interest-only" loans) or interest and principal reduction (in level-payment amortization loans). This is also commonly referred to as the mortgage payment.

Depreciation Allowance - An accounting concept that permits the reduction of taxable income in determining tax liability. Developers are permitted to subtract a portion of the value of a property from their taxable income each year for a specified number of years. Since depreciation allowance is not a cash expense and since the actual depreciation (loss in value) of the property bears no relationship to the depreciation allowance for tax purposes, this amount forms the basis of tax shelter for real estate.

Depreciable Basis - The portion of the real estate investment against which the investor may take either straight-line or accelerated depreciation. It is most commonly the purchase price of an income-producing property, less the value of the land, plus the cost of any subsequent improvements since purchase, less previously taken depreciation deductions.

Effective Gross Income - The amount of income available to pay expenses after vacancy losses have been deducted.

Equity - An investor's cash investment in real property. It does not include the financing contributed to the project by a lender, i.e., debt. Equity can grow as the value of the property increases, and the mortgage principal is gradually reduced by mortgage payments.

Financial Leverage - The increase in the rate of return to the equity investor due to borrowing funds. Favorable financial leverage exists when the rate of return on the investment is greater than the cost of borrowing funds. Unfavorable financial leverage exists when the cost of borrowing is greater than the rate of return on the investment.

General Partnership - A joint ownership form characterized by personal income tax rates and unlimited liability.

Internal Rate of Return (IRR) - An investment analysis technique that calculates for the rate that will reduce future cash outflows from a real estate investment to equal the initial cash investment (inflows). This is sometimes called the yield on the investment.

Joint Venture - A legal arrangement in which two or more parties undertake to share the risks and rewards of a venture on an agreed basis.

Limited Partnership - A form of ownership in which partners are divided into two classes: the general partner or partners who actively manage the operations of the group and bear full responsibility for its affairs, and the limited partners, whose exposure is normally limited to the amounts for which they are obligated under the terms of the partnership agreement and who have no control over the affairs of the partnership.

Mortgage - A legal instrument under which property is pledged to secure the payment of a debt or obligation, subject to statutory requirements governing the procedure for foreclosure in the event of a default.

Net Operating Income (NOI) - Gross property income, less operating expenses and property taxes. It does not reflect further deductions for mortgage payments, income taxes, depreciation, or non-operating expenses.

Net Present Value - The amount that results when the initial cash expenditure of a real estate investment is subtracted from the value of future receipts from the investment and is discounted at an acceptable rate.

Note - Evidence of indebtedness given by a borrower to a lender which is customarily secured by a mortgage on real estate, a letter of credit or other form or security.

Percentage Leases - Leasing arrangements that allow for a varying rent schedule according to volume of sales or income.

Permanent Loan - A mortgage loan intended to serve as permanent financing for the ultimate owners of the property. Sometimes this is called an end loan.

Points - Financial charges paid in connection with loan commitments or loans usually expressed as a percentage of the total amount borrowed.

Potential Gross Income - The amount of rental income that would result from 100% occupancy.

Reversion - The price or value of income-producing real estate at some point in the future when its sale can be expected.

Selling Expenses - The transaction costs associated with the conveyance of interests in real property.

Soft Costs - Development costs other than those devoted to land and actual construction, such as interest on borrowed funds, architectural and other professional fees, marketing costs, and incidental costs.

Tax Shelter - The opportunity to protect current income from taxation by taking current deductions against income that defer taxes and converting the income deferred from an item subject to the ordinary income tax to one qualifying for exclusion before taxation. Tax shelter exists wherever the depreciation expense is greater than the amortization of principal.

Vacancy Allowance - The amount that reduces potential gross income based upon the probability of the occurrence of vacancies.

